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Published Bi-Monthly

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CHIPS FROM THE QUARRY

COMING EVENTS

July 23, 24, 1960 — 4th Annual Rock Hound Round-up of the Pine Tree Gem & Mineral Club, Swift River, Maine. For information Contact Freda Thomas, Roxbury, Me.

Aug. 4-6, 1960 — Eastern Federation of Mineralogical and Lapidary Societies, Municipal Auditorium, Asheville, N. C. Host: Southern Appalachian Mineral Society. For information contact: Chamber of Commerce, Asheville, N. C. (Field Trips, Aug. 7-13).

Aug. 10-13, 1960 — 2nd Annual Spruce Pine Mineral & Gem Festival, Spruce Pine, N. C., Sponsored by Chamber of Commerce, Spruce Pine, N. C.

Aug. 13, and 14, 1960 — The Colorado Mineral Society is sponsoring a gem show this summer, if possible will you please publish the following notice in ROCKS AND MINERALS:

The Denver Gem and Mineral Fair to be held August 13 and 14, 1960.

Time: Saturday August 13th, 10:00 A.M. to 9:00 P.M.

Sunday August 14th, 10:00 A.M. to 6:00 P.M.

Place: Jefferson County Fairgrounds, 15200 West 6th Ave. (U.S. Highway #6 between Denver and Golden, Colo.) There will be Dealers, Competitive and Non-Competitive Displays. Muriel Colburn, Corres. Sec'y, 2821 So. Jackson St., Denver 10, 1960. Admission 25¢ for adults and children.

Sept. 25, 1960—3rd Annual Gem and Mineral Show of the Rib Mountain Gem & Mineral Society, Inc., will be held in the Youth Dining Hall at Marathon Park in Wausau, Wisc., from 1 P.M. to 9 P.M. For further information contact Miss Jeanette Zochert, Sec., 1820 Fairmont St., Wausau, Wisc.

Aug. 14, 1960 — 4th Annual Open Air Fine Art and Craft Exhibition will be held on the ocean front sidewalk along West Beach on palm-lined Cabrillo Blvd., Santa Barbara, Calif., from 9:00 A.M. to 5:00 P.M. For further information contact Miss Maria Margelli, P.O. Box 818, Santa Barbara, Calif. (founder and producer of the Exhibition).

Oct. 29-30, 1960 — Silver Anniversary Show of the San Francisco Gem & Mineral Society, Inc., will be held at the Scottish Rite Auditorium, Van Ness & Sutter St., San Francisco, Calif. For further information contact Mrs. Carol Reinecke, Corr. Sec'y., 4134 Judah St., San Francisco 22, Calif.

Romanella's New Mineral Department

R. C. Romanella, 22 West 48th Street, New York 36, New York, has opened a new minerals department and is handling first quality mineral specimens. His office will be open all summer long—stop in while in New York!

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PHOTO ON THE COVER

We are indebted to Noble Price (Price's Gun House), Pana, Ill., for the photo used on the front cover of this issue. In a recent letter, Mr. Price writes:

"I am sending a photo of a green moss agate cabochon $2\frac{1}{4} \times 1\frac{9}{16}$ " which I made and which seems unusual in that it has as its main point of interest an apparition which my rockhound friends have named "The abominable Snowman", inasfar as he come from the land of the Himalayas in India."

The "Snowman" is the whitish figure on right.

A Rare-Earth Pegmatite Near Nuevo, Cal.

By PAUL F. PATCHICK, Geologist, Mineralogical Society of Southern California,

John Melhase wrote (1) that "although California is exceptionally rich in mineral species, many of which are found nowhere else in the world, it has probably been noticed that among them are very few minerals belonging to the rare-earth group. It is, therefore, interesting to learn that some of these minerals are coming to light, and indications are favorable for the discovery of additional species in the near future. In 1936 monazite and xenotime (pronounced: zee-no-tie'm) have been discovered in the Southern Pacific Silica Quarry near Nuevo, Calif."

The writer visited the locality in 1952 and again in 1956, and would like to pass on what he has learned about it to readers of ROCKS AND MINERALS. Six rare-earth minerals have been recognized from a total of 16 minerals.

LOCATION

This locality is about 15 miles south-easterly from the city of Riverside, and is best reached by following U.S. Highway 395 out of Riverside to the Nuevo turnoff, which is about 1.5 miles north of Perris. The turnoff is well marked and should not be hard to find. The pegmatite is roughly two miles from the "city" of Nuevo in an easterly direction. Do not take the road left out of town, but continue east, past an orange orchard and past a dirt road to the right which goes to the Crystal Springs Ranch. (See sketch map.) Not more than 400 yards past this road is another dirt road with "private" and "no trespassing" signs well in evidence. However, as the quarry is no longer in use, there is no objection by its owner to collecting. Permission should first be secured, and then a sheriff's permit obtained.

The dirt road is easily recognized, for at this point one will see a large, tin-covered water reservoir at the right side of the road, and next to this numerous turkey pens. If one follows this dirt

road past the gate (you must obtain a key from the owner) for not more than a mile over a very rutted-up excuse for a "road," which at times is rather steep, one will arrive at a place where another road joins it. This spot is marked with a sign pointing east, which has "Mrs. Baxter" painted upon it. At this point turn sharply right (south), and continue for about 440 yards until the road widens. Here is the parking place where the cars must stop. Continue on foot up this road, which is but a trail now, to the quarry dumps. A jeep can easily make it, however. It is about 660 yards from the cars, and all uphill.

GEOLOGY AND MINERALOGY

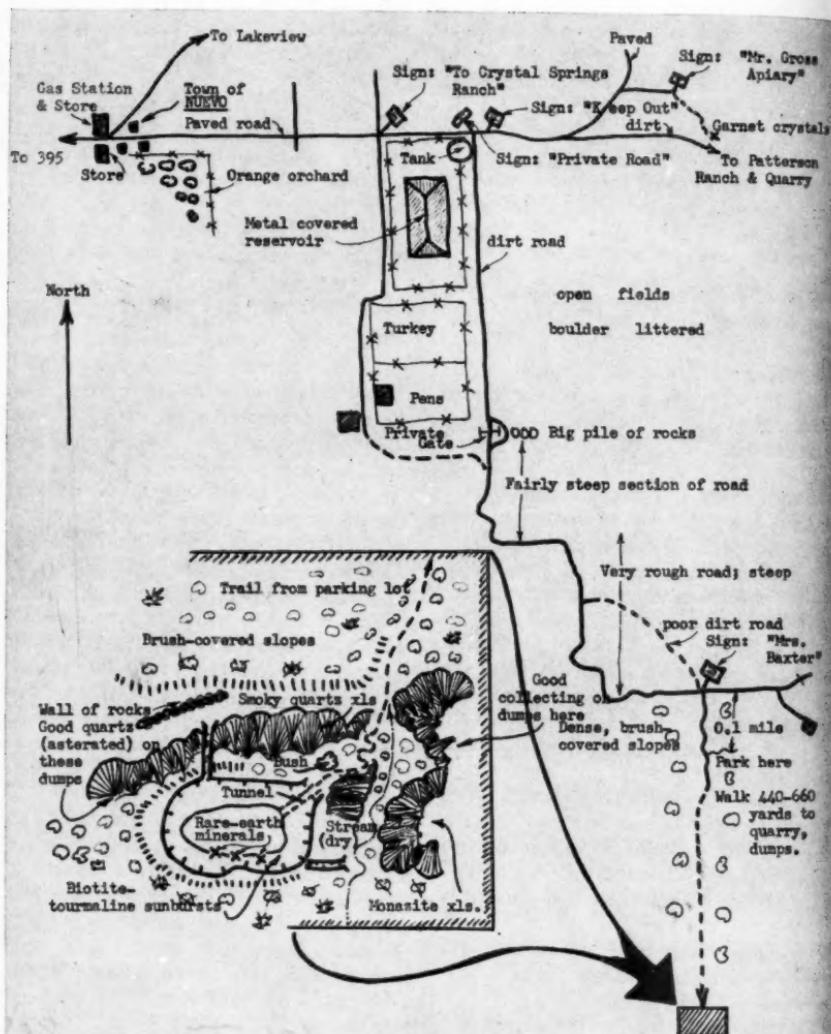
The quarry is excavated in one of several quadri-zoned pegmatite dikes cutting tonalite country rock. An open cut in the hillside penetrates the dike and then opens out into a "glory hole" a hundred feet in diameter and fifty feet in depth (see geologic sketch map and section). The upper part of the walls are vertical, in places over-hanging; while below are a series of benches pitching steeply toward the center of the hole.

The material quarried here consists chiefly of quartz with minor amounts of feldspar (plagioclase varieties albite, cleavelandite and perthite, with some microcline). The quartz was used as a source of silica and the feldspars discarded as waste upon the dumps (which incidentally sometime afford the best specimens without too much work). The quartz may be found in opaque white masses with here-and-there a bunch of translucent material of pale rose to violet tint. Occasionally, fine specimens of tourmalated-smoky quartz crystals (up to 7 inches long) may be dug out by ambitious (or lucky) collectors.

A more conspicuous feature of the quarry are the large "sunbursts" of black tourmaline (schorl) and radiating brownish biotite mica exposed in the walls. These are often several feet in diameter

and consist of a host of crystals radiating from a common center and contrasting sharply with the white quartz matrix. The schorl crystals are slender and of various sizes. Occasionally, individuals may be found up to four inches in di-

ameter and over two feet long. But, owing to the fractured condition of the crystals, it is rarely possible to collect a specimen over one foot in length. Roland von Huene found the largest terminated one I know of; it measured about

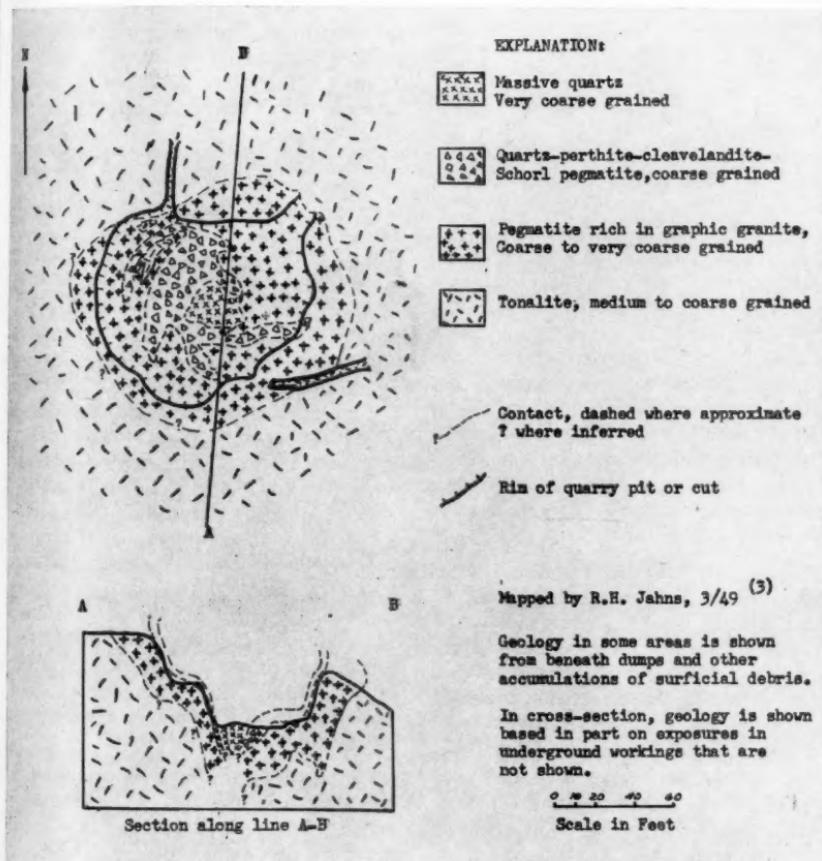


Sketch map of Nuevo, Calif., area.

But,
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9-10 inches x 3 inches. He merely turned over a chunk of pegmatite sticking out of the ground on one of the dumps, and there it was! A whack with a pick and out came the crystal, showing perfect crystal faces of the characteristic rhombohedral type (1011). Much work with a sledge hammer and chisel may, along with patience, produce similar specimens for you too. A few of the crystals if carefully taken out, may be finely terminated as well.

Xenotime, a yttrium phosphate, occurs in well-formed tetragonal crystals implanted upon the tourmaline. They are yellowish brown, opaque, and consist of nearly flat double pyramids, without prisms. They can be distinguished from monazite which also occurs here, by their crystallization and color. Monazite is monoclinic and reddish brown. Both minerals have a perfect cleavage. The largest individual crystals of xenotime are seldom over a quarter of an inch in



Geologic sketch map of pegmatite locality at Nuevo, Calif.

length. Many are of microscopic size and commonly occur in rounded intergrown groups coated with kaolinite, which often completely obscures the crystals. It can easily be scrubbed off with soap and water, using a toothbrush.

The monazite is found in crystals up to two inches, although the majority are from a quarter to one-half inch long. Xenotime has a hardness of 4-5, and is infusible and insoluble in acids. Monazite, on the other hand, is 5 to 5.5 in hardness, and is decomposed by concentrated sulphuric acid. When ammonium oxalate is added to this, the rare-earth metals will be precipitated. Both minerals yield the yellow precipitate characteristic of phosphates when treated with ammonium molybdate, to which a few drops of concentrated nitric acid has been added.

Also described by Melhase, and collected by the writer, were crystals of *samariskite*. This complex oxide (or columbate-tantalate) of the rare earths had been identified as *nuevite*, a new mineral, but later was found to be identical with samarskite, and so discredited. (2) It, along with other minerals, is intimately associated with the schorl, often in parallel growth. The samarskite crystals are found coated with a yellow or brown alteration shell. It is orthorhombic, possesses a velvet black color, has a hardness varying from 5 to 6, and has a vitreous, pitchy to resinous luster. Samarskite from here and elsewhere is radioactive.

Garnet variety andradite, some imbedded in tourmaline, others implanted on albite crystals, were found by the writer. They are associated, as are many other minerals, with good specimens of graphic-textured granite pegmatite. Much of the latter may be easily collected from the many talus slopes of the dumps.

An unusual occurrence of *crytolite* in parallel growth with *yttrialite* (both complex rare-earth silicates) and xenotime have also been noted from here. This rare metamict combination is found in the form of thorn-like cones implanted on schorl crystals. These masses of di-

vergent radiating crystals are highly radioactive, due to their uranium and thorium content. Accordingly, a Geiger counter proves useful for prospecting purposes. Dr. Perry Ehlig, while on a collecting trip with me, effectively used a counter and discovered much of the above mentioned minerals, and in addition, the largest samarskite crystals ever found at Nuevo. They were detected through 2-3 inches of pegmatite overburden, and measured 2-3 inches in length by 1-1½ inches wide.

Another uncommon mineral has been doubtfully identified from this locality. A few minute tabular crystals with a questionable orthorhombic crystallization, black color, nearly opaque, a hardness from 5.5 to 6, and a bright pitchy to resinous luster has been called *yttrorastsite*. This oxide of the rare earths and titanium was identified tentatively with the spectroscope. It has been found at only one other locality in the world: Burnet County, Texas.

TIPS FOR COLLECTORS

At Nuevo, the serious collector will profit by wearing stout hiking shoes or boots and bringing along an old pair of gloves. The quartz is highly fractured and traversed by incipient cleavage planes which cause it to break into small "cubic" fragments. These razor sharp edges can easily cut your hands if they are left unprotected. Also, a collecting bag equipped with a good supply of newspaper (old telephone books are ideal, as suggested by Burton Jirgl) for wrapping specimens is desirable. This is a very dry locality, so canteens are also in order. Please don't smoke near the edges of the dumps during the summertime. The brush is very thick, and is a dangerous fire hazard.

The road to the area is quite steep, and after a heavy rain it can be very muddy. Be prepared to hike in, should the road prove impassable. This is not a trip for children. The quarry is steep-walled, and the temptation to climb and explore is great—much danger from fall-

ing rocks may be averted if notice is paid to this warning in advance.

Have fun, and don't forget to send me my usual ten percent "commission" of doubly terminated samarskite crystals for telling you about this wonderful collecting spot!

LIST OF MINERALS AND ROCKS AT THE NUEVO QUARRY

Minerals: Feldspar, variety microcline; plagioclase, perthite (microline with lenticular lamellae of albite); albite, cleavelandite (platy variety of albite); quartz, (asterated if cabochon cut with regard to optic axis) some smoky and some pink varieties; garnet, variety andradite; mo-

nazite, xenotime, cyrtolite, yttrialite, samarskite, yttrocrasite, columbite, tourmaline, biotite mica, kaolinite.

Rocks: Graphic-granite pegmatite, and tonalite (a type of granodiorite in which the plagioclase feldspar is greatly in excess of the orthoclase.)

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VISITING ROCKHOUNDS WELCOME

The following subscribers would be delighted to have rockhounds call on them when passing through their cities. If any one else wants his name added to the list, just let us know.

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John & Clara Roder, Hwy 7 North, 6 miles from downtown Hot Springs, Ark.

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(Continued on page 367)

MONAZITE AND CYRTOLITE CRYSTALS AT DAY, NEW YORK PEGMATITE

NEW AMERICAN LOCALITY

By ELMER B. ROWLEY, 54 West Notre Dame St., Glens Falls, N. Y.

The Overlook pegmatite in the town of Day (Saratoga Co.), New York with its extra-large, choice black tourmaline crystals in rose quartz has been described in detail by Rowley (1942 a). The radioactive mineral from here first noted and tentatively called samarskite by Rowley (1942 b), was later described as polycrase by Smith (1947, 1948). However, no mention has ever been made of the allanite, monazite, and cyrtolite crystals also found at this locality.

The allanite crystals at Day are not especially unusual, for similar crystals are common at many localities in the Adirondack syenites and their associated pegmatites. They are mentioned only to record their presence at this pegmatite where they are closely associated with biotite.

Monazite and cyrtolite, on the other hand, are rarely found in New York State. From the writer's knowledge their presence in the Day pegmatite represents but the third known occurrence of monazite either in situ, or as detrital material, and the second known occurrence of cyrtolite, within the state. Monazite has been found in small crystals with sillimanite in Manhattan Mica Schists at Yorktown Heights (Whitlock, 1903), (Bodelson, 1948), and as small crystals in minor pegmatite veins cutting these schists at 155th St., and 10th Ave., and at 171st St., and 11th Ave., New York City (Whitlock, 1903). Cyrtolite has been found in crystals and large masses at the Kinkel pegmatite quarry, Bedford, Westchester County, New York (Newland, 1916). The Day pegmatite as a locality of these two comparatively rare minerals deserves recognition.

Monazite is a phosphate of cerium and lanthanum (Ce, La) (PO_4). Either, or both, thorium and yttrium may substitute in small amounts for the (Ce, La). Thor-

ium-free monazite is a rarity and the ThO_2 content usually ranges from 1 or 2 to 10 or 12 per cent with a possible upper limit of 30 per cent. It is probable a complete isomorphous series with thorium exists, but no such naturally occurring mineral series has ever been noted. Its radioactivity is well known to be dependent on, and proportionate to, the amount of included thorium. Uranium in minor amounts has been reported in monazite. It crystallizes in the monoclinic system, with prominent macro-pinacoid (100) facial plane development rather common. The color ranges from yellowish-brown to reddish-brown with a semi-resinous lustre. Monazite being especially resistant to weathering agencies is very commonly found as detrital grains in residual sands and soils in certain regions of the world. Its high specific gravity causes it to be concentrated in placer deposits with such other heavy minerals as magnetite and zircon, from which most of the world's supply is obtained. Monazite is a relatively common, though minor mineral component in granitic igneous rocks and metamorphosed gneisses. Large crystals are however, limited principally to granitic pegmatites, more rarely to syenitic pegmatites.

Zircon, $Zr(SiO_4)$, may contain small amounts of uranium, thorium and yttrium substituting for zirconium. Cyrtolite is essentially metamict zircon. The color is reddish-brown usually lacking the high glossy lustre of unaltered brown zircon crystals, and commonly occurs as composite crystallized masses. Its occurrence is fairly well limited to pegmatites containing a concentration of radioactive minerals, but is also found in granites and in metamorphosed silicate-rich rocks (skarns).

Both the monazite and the cyrtolite at the Day pegmatite occur intimately associ-



Monazite Crystal with Polycrase, overall size 2 $\frac{1}{8}$ " high - 3 $\frac{1}{2}$ " long
M = Monazite, P = Polycrase, T = Tourmaline

ated and intergrown with the polycrase. Some of the polycrase is partially coated with yellow material representing partial metamict alteration. All of the cyrtolite seen by the writer was in sharp crystals rarely over 6mm long, showing pyramidal and prismatic forms. Most of the monazite occurs as microscopic crystals not exceeding 3mm in length. However, the writer collected two very large choice monazite specimens. One, measuring 2" by 3", is a very rich broken mass intergrown with polycrase and sharp cyrtolite crystals. The other measuring 1 $\frac{3}{4}$ " by 2 $\frac{1}{2}$ " is a nearly complete single monazite crystal with associated polycrase as illustrated in the photograph. The first specimen is in the Harvard University

collection, the second is in the collection of the writer.

In addition the writer has noted microscopic brilliantly lustrous, waxy yellow material with the polycrase. This could be uranothorite but without positive identification this represents purely a speculative supposition.

The majority of pegmatites containing rare-earth elements usually produce a suite of several radioactive minerals. Pegmatites producing but one, two or three such mineral species are relatively uncommon. The Day occurrence has produced but three positively identified radioactive mineral species thus placing this locality in the minority as far as this type of geological formation is con-

cerned. The allanite found here is practically non-radioactive.

In order of decreasing abundance the radioactive minerals are 1) polycrase, 2) monazite and 3) cyrtolite. The word abundance is used in the relative sense as all three minerals are rare and scarce at this locality.

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Whitlock, H. P. (1903) — New York Mineral Localities - N. Y. S. Museum Bulletin No. 70 - pp 48 and 49.

New York Mineralogical Club, Inc., Will celebrate 75th Anniversary

In 1961 the New York Mineralogical Club, Inc. will celebrate the 75th anniversary of its founding. A dinner and reception are planned, at which prominent mineralogists throughout the country will attend, and other mineral organizations will participate.

On September 21, 1886, in the home of Professor Daniel S. Martin at 236 W. 4th St., N.Y.C., the club was organized. A month later the first meeting, presided over by George F. Kunz, was held at the old 23rd St. building of the College of the City of New York. Eight members attended, including Kunz, Roebling, Hunt, Chamberlin, Martin, Niven, Amend, and Rosche. Monthly meetings followed at the homes of members, with the hosts presiding, so that no president was named. Kunz was elected secretary.

In March, 1887 the name, New York Mineralogical Club was adopted. A constitution and by-laws were approved two meetings later. Since no president was required by this constitution, none was elected until April, 1895, when George F. Kunz became the first president.

At the end of the first year it had a membership of 46, including notable mineralogists. Perhaps the living member with the longest term of service is Ernest Weidhaas whose association with the organization began in 1916. Mr. Weidhaas is extremely active.

In 1891 the club joined the Scientific Alliance, and later became an affiliate of the New York Academy of Science. Since 1898 meetings have been held continuously at the American Museum of Natural History in New York, and latterly at Columbia University.

The club has presented to the American Museum its fine collection of New York City minerals, now on display in the Morgan Mineral Hall. The prominence of the members, past and present, is attested to by the fact that nineteen mineral species and varieties have been named after them.

LAPIDARY JOURNAL SOLD!

The following announcement, dated May 3, 1960, has been received from the offices of LAPIDARY JOURNAL.

Editor R&M:—

The following announcement may be of interest to your readers:

"The Lapidary Journal, Inc., has been sold by the founder Lelande Quick to Lee S. Packard, president of Arts & Crafts Press, San Diego, Calif., and Mr. Quick will retire. The purchase is a personal one by Mr. Packard. His firm has printed The Lapidary Journal for the past five years, as well as a number of other magazines and 700,000 phone books for Southern California cities. The Lapidary Journal will be published from the present offices in Del Mar, California as before.

"Hugh Leiper, F.G.A. who has been Associate Editor for the past two years, has been named Editor of the Lapidary Journal. He was formerly editor of the Mineral Hobbyist of Austin, Texas, and co-author of the recent book GEM-CRAFT, published by Chilton Company, Philadelphia, which has now gone into its second printing. Mr. Leiper is a gem cutter and faceter of long experience, and a graduate gemologist of the Gemmological Association of Great Britain.

"The organization publishes both the Lapidary Journal and the Lapidary Reporter, a paper for dealers catering to the gem and mineral hobbies."

ROCKS AND MINERALS wishes LAPIDARY JOURNAL continued success under its new ownership.

**BUY and USE
A GOOD
MINERAL BOOK**

ROCKS AND MINERALS

GYPSUM CAVE IN IRAN

By SYLVIA E. CZAYO

Upon my arrival in Tehran, Iran, early in July, 1959, it was my good fortune to become acquainted with Mr. Hashem Fayaz, Assistant Professor of Mineralogy, Faculty of Science, University of Tehran. Since I usually show a "keen interest" in minerals, Mr. Fayaz stated that a large gypsum cave was discovered near Tehran and he invited me to accompany him on a field trip to the cave site.

This gypsum cave is located about six miles northeast of the city limits of Tehran and is between the city and Mount Damavand which has an altitude of 18,934 feet and is the highest mountain in Iran. After leaving the city and pavement, we approached the site over gravel roads which were traversed by trucks hauling gypsum to the kilns in the city where it is fired into lime. As we neared the gypsum cave area, we passed a long series of quarry excavations which led into deep caverns from which the trucks emerged. Many of the caverns were inter-linked, and some had been worked out having pools of water and inhabited by bats, pigeons and partridges.

Some of the quarries were worked with

drills and blasting, while others were with hand labor using crowbars. During the summer these dug-out areas were as hot as a furnace. The day I visited the area it was only 115 degrees in the shade, and it actually felt cool to get out of the burning sun.

The gypsum cave was located at the crest of one of the foothills to the Alborz mountain range and was at an altitude of approximately 5300 feet. The cave was located just to the right of the main entrance to one of the large caves. The entrance was about four feet above the ground level and only large enough for one person to enter. After crawling about ten feet from the entrance one could stand up in the cave which angled upward to a height of fifteen feet. In the light from my flashlight, the thousands of gypsum crystals sparkled with breathtaking beauty and I felt that at last I was in a rock hound's paradise!

The crystals were in every conceivable size and shape, some were intertwined and others had mud and water inclusions. Some were clear while others had bubble-type formations inside them, and



Figure 1—The mountain from which the lime is being extracted.
Mesgarabad Mine, Iran



Figure 2—Observed in the stratification of marl are layers of gypsum resulting from many secondary foldings. Mesgarabad Mine, Iran.

when split along the basal cleavage would release water or mud. A few of the crystals which had been disturbed by an effort to remove them, were dripping water which was coming from some source above the cave. A few also had movable sand inclusions.

The University of Tehran considers this as the greatest gypsum cave discovered in Iran to date. Iran is famous for its numerous caves located in extensive mountainous areas throughout the coun-

try, and artifacts are being found in many of them. It was my good fortune to obtain a few good samples from the gypsum cave before leaving the country.

Mr. Hashem Fayaz has consented to describe this cave which is located in the Mesgarabad mine area as he had spent considerable time in examining the cave and measuring the crystals. His report was made in the Farsi (Iranian) language and the translated report follows:



Figure 3—Cave with beautiful crystallized gypsum. Mesgarabad Mine, Iran.

MESGARABAD MINE, IRAN

By HASHEM FAYAZ

Assistant Professor of Mineralogy, Faculty of Science, University of Tehran

The Mesgarabad Mine, 10 kilometers east of Tehran, is presently producing lime for masonry construction in the city of Tehran. In this area over the cretaceous and conglomerate layers at the beginning of the Eocene Era, there existed a thick layer of clay and puddles of marl. Observed in the stratification of marl are layers of gypsum resulting from many secondary foldings. (Figs. 1 & 2).

During the exploitation of the Mesgarabad Mine, there was opened a cave with beautiful crystallized gypsum. So far investigated this opening is unparalleled and incomparable in Iran as to beauty and volume of these gypsum crystals. (Figs. 3, 4, 5).

The opening or mouth of this cave

faces northwest and is oval in shape. The larger diameter is 180 centimeters and the smaller end 80 centimeters. It is situated 1,330 meters above sea level and is 9 meters in length, 3.5 meters horizontal with the remaining 5.5 meters steeply inclined toward west. The ceiling near the opening or mouth is low but in the far end much higher so that in its last point the height is about 10 meters. (Fig. 6)

The crystals covering this cave vary in size from micromount to nearly $\frac{1}{2}$ meter. The largest obtained so far is 40 centimeters in length with a diameter of 15 centimeters clinodiagonally and 13 centimeters orthodiagonally. Some of these crystals are single and others are aggregated. (Fig. 7)

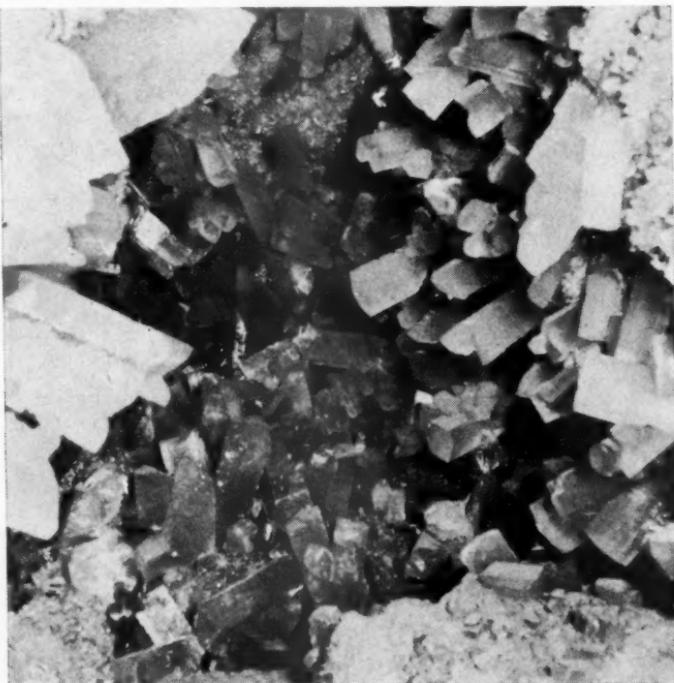


Figure 4—Beautiful crystallized gypsum in Cave, Mesgarabad Mine, Iran



Figure 5—Group of gypsum crystals from the Mesgarabad Mine, Iran

The luster of these crystals is vitreous to pearly. Color ranges from colorless, white, gray to a yellow brown. Specific gravity is 2.32.

Flame examination gave an orange glow during this test due to the calcium present. When the cleavage fragment was held over the flame it became white. Under the ultraviolet light the crystals were yellow and phosphorescent.

In the blow pipe test with charcoal support, sodium carbonate produced something like a hepatic clot. It dissolved readily in hydrochloric acid and its ammonical solution with ammonium oxalate produced a white precipitate of calcium oxalate.

All the crystals obtained were twinned and crystallized in the monoclinic system.

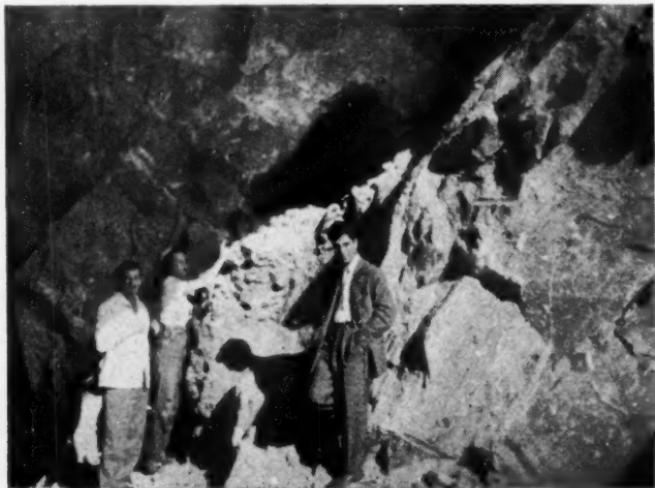


Figure 6.—The opening or mouth of cave. In the Mesgarabad Mine, Iran
Sylvia Czayo (center), Hashem Fayez (right), a friend (left).



Figure 7.—Beautiful crystallized gypsum in Mesgarabad Mine, Iran

EASTERN FEDERATION CONVENTION

ASHEVILLE, N. C.

Aug. 4 - 6, 1960

A highlight of the Eastern Federation of Mineral and Lapidary Societies Show at Asheville August 4, 5, 6 will be a special exhibit from the Smithsonian Institution valued at more than \$200,000. This loan exhibit, recently acquired by the Smithsonian and never before publicly displayed, consists of a perfect cut emerald weighing 154 carats, a group of gem quality diamond crystals weighing from 5 to 20 carats each and an uncut black diamond weighing 740 carats.

Another special exhibit will be the Brig. Gen. Miller Arthur jade display. This consists of a 16" by 24" green jade tray carved in the shape of a lotus leaf holding five large bunches of grapes carved from two shades of jade,

amethyst, rose quartz and carnelian, and nine large pieces of fruit carved from these same stones.

An outstanding panel of speakers will include Paul Desautels, Smithsonian Institution, "Crystal Growth;" Commander John Sankanas, "Gems and Identification of Non-Opaque Minerals;" Vernon Hurst, Georgia State Geologist, "Identification of Opaque Minerals;" N. C. State Geologist Jasper Stuckey, "N. C. Minerals;" John Hanahan, Belmont Abbey College professor of Geology, "Minerals of the Southern Appalachians; E. T. Ridgeway, Columbia, S. C., "Faceting;" and Louis Perloff, Winston-Salem, N. C., Mica Crystals."

THE TIN MINES OF IRISH CREEK, VIRGINIA

EDWARD J. MARCIN

1917 Meadowbrook Road, Merrick, L. I.

The tin deposit at Irish Creek, Rockbridge county, Virginia is one of the few localities of the western hemisphere where cassiterite occurs, and is still present, in quantity. Its history begins around 1883 when a plot 10 miles long and 4 miles wide was prospected. The entire section showed presence of tin ores. There were about 40 odd test pits, trenches, shafts and tunnels made, of which only the two major workings survive in a recognizable state. Most of the others are caved-in or badly overgrown. These two workings are located at the junction of two streams Irish Creek and Panther Run (we Yankees would call these brooks!). The two mines and their respective dumps occur in an area roughly $\frac{1}{4}$ mile wide and $\frac{3}{4}$ mile long (see map). The location is fairly open and the dumps accessible for collecting without the use of shovels. With assiduous search (as what mineral trip does not require "assiduous" search?), good specimens of various mineral species can be found. Cassiterite is not uncommon and specimens of exceptional quality can be found. The best crystallizations occur associated with quartz although the greater quantity of the ore material, massive but occasionally in crystals, is found in the greisen (of which, more anon). The author was fairly successful on his trip, not only because of the number of specimens found, but also for their general good quality. One specimen measuring approximately 6x6x2 inches is superbly crystallized showing large individual crystals of cassiterite some up to $\frac{1}{2}$ inch in diameter. Most of the cassiterite found is opaque and usually stained brown by limonite, occasionally translucent red-brown crystals are also found.

The list of mineral species that were found here is rather imposing, and it is probable that most of them can still be found. The author's finds are starred in the appended list, also included are his observations as to their quality (which is undoubtedly subject to debate).

There are two main routes to follow

in order to reach the mines. One, is by way of Lexington on U. S. 11 and then thru Buena Vista on U. S. 60. From Buena Vista country roads will get one to the Irish Creek mines. The other way is from the Blue Ridge Parkway where the Irish Gap exit is used, this puts one directly on the country roads. Whichever way is chosen it is advisable to contact the state police or the local citizenry to get directions and road conditions. The country roads are not too bad, but they are mountain roads. The author approached the mines from different directions on his three visits, and each time a different route was followed, therefore he does not feel qualified to definitely recommend a route although he prefers the Blue Ridge Parkway—Irish Gap exit circuit. It is good policy to stop at Cornwall, which is enroute from the Buena Vista or Irish Gap directions, and get permission to visit the property from the South River Lumber Company who are in charge. Permission is readily granted. Upon arrival at the mine site, contacting an amiable gentleman named Mr. Robert Painter is rewarding because of his knowledge of the mine history and is well acquainted with the exact locations of some of shafts, tunnels and test pits. Mr. Painter's home is visible from the parking spot where one enters the mine



property. The mill ore piles are also visible from the road.

List of minerals found at Irish Creek, Virginia.

Greisen association:

- *Quartz
- *Fluorite (F)
- *Cassiterite (E)
- *Muscovite (P)
- *Siderite (P)
- *Pyrite (P)
- *Beryl (G)
- *Sphalerite (P)
- *Calcite
- *Scheelite (P)
- *Wolframite (P)
- *Feldspar
- *Tourmaline
- Vermiculite
- Montmorillonite (Clay minerals)
- Nontronite
- Ilmenite
- Leucoxene
- Clinzoisite
- Bismuthoplagionite
- Pnaekite
- Chlorite
- Ankerite
- Arsenopyrite (gold & silver bearing?)

Quartz association:

- *Cassiterite (E)
- *Siderite (P)
- *Limonite

Granodiorite association:

- *Pyroxene
- *Hornblende
- *Biotite
- *Zircon
- *Apatite (I)
- Titano-Magnetite
- *Sericitic
- *Chlorite

Rock types:

- Gneiss (G)
- Schist
- Grano-diorite (E)
- Aplite
- Trap
- Unakite (E)

The following initials signify:

- E - Excellent
- G - Good
- F - Fair
- P - Poor

The cassiterite deposit, according to Dr. T. L. Watson in his *Mineral Resources of Virginia*,—published in 1907, is similar if not identical both mineralogically and geologically, to that of Cornwall, England. The tin ores occur in crystalline rocks such as gneiss and granodiorite (which is a rock intermediate between granite and diorite; diorite is a granular igneous rock composed mainly of hornblende and feldspar with variable amounts of iron ore and biotite). These rocks are much faulted, broken and fissured. The fissures are filled with basalt and other igneous rock. The greisen is one of the fissure filling products. Greisen is a high temperature recrystallization of the original granodiorite with the introduction of fluorine, boron, phosphorus, and water vapor. These mineralizers were responsible for the formation of the tin ore and such minerals as tourmaline, fluorite and apatite. The richest tin bearing area is roughly 4 miles long and 3 miles wide, bearing in a north-east, south-west direction (strike). The two diggings described in this article are fairly centrally located. The assays of the ore varied from as low as 2% to as high as 20%, with a general average of something like 2%. The reason for the abandonment of these mines is not that the ore was absent, but that too many heirs were present with attendant litigation.



The mine area is beautifully situated in an extremely scenic ravine. The brooks, open greenswards and large trees make this an ideal picnic spot. There is also a flowing spring where water of fine quality and coolness is readily available. Truly an ideal spot, and as such it is only common decency to leave it as clean or cleaner than it is found. However, there is one caution to be observed, one that is true of all old mine and quarry locations, and that is the presence of

snakes. The author almost stepped on one copperhead which came out from under a rock he was standing on (but *not* long!), and then had the near privilege of practically putting his hand on another. All in the space of a half hour. He later found out that dump number one is a nesting ground for these personable creatures. One consolation though—no poison ivy and the added attraction of good specimens.

DUMORTIERITE, A DEEP HUED GEMSTONE

By RALPH C. GOSSE
Albany, New York

The three well known qualifications for any mineral to rank as a gemstone are, rarity, durability, and beauty. Dumortierite possesses all three of these qualities, but unfortunately, it has never achieved the popularity it deserves. Perhaps this is because of two reasons, its comparative rarity in fine gem quality material, and so very little has been written about this deep hued gemstone.

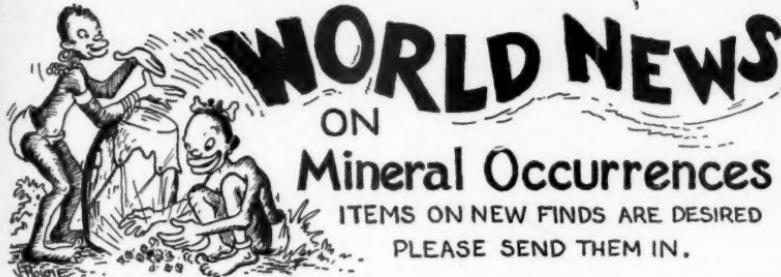
Dumortierite is a basic aluminum borosilicate usually occurring in gneisses and schists. It has a hardness of 7, refractive index 1.678 to 1.686, specific gravity 3.26 to 3.36, and a vitreous luster, (see Dana's Textbook of Mineralogy for further technical data). It was named after the French paleontologist, Vincent Eugene Dumortier (1801-1876).

This rather uncommon mineral has been used commercially in industry, and to a limited extent as a gemstone, especially esteemed by collectors of gems. It has been mined at several places in the world for its specialized application in the ceramic field where it is employed as a vital ingredient for electrical, chemical porcelains, and pyrometer tubes.

The deep vivid blue and violet hues of dumortierite may vary in its color or shade from locality to locality. The blue color is quite comparable to lazurite, but dumortierite has a greater hardness and a somewhat fibrous structure which easily serves to distinguish it from lazurite and other similar appearing minerals.

The use of dumortierite as a gemstone is by no means a new application for this highly colored mineral, it may surprise many to note that it was known and used as a gem during Biblical times. It was found as carved objects in a number of ancient Egyptian tombs when they were excavated. In more recent times, it has been carved into art pieces in China, where it has reportedly been sold to imitate the better know lapis lazuli.

Dumortierite has been found at many localities throughout the world, such as the United States, France, Madagascar, Brazil, Norway, etc., and a more recent discovery was made in South West Africa, the color being a deep cobalt blue of fine gem quality. Among the many localities of dumortierite in the United States, California has furnished the best gem material and in several shades of color. Near Dehesa, San Diego County, Calif., it is found in a bright violet red color on the dumps of an abandoned mine associated with gneiss rock. Near Ogilby, Imperial County, Calif., it is found in a violet blue color in large boulders. At both of these California localities the dumortierite is not all gem quality, much of it is coarse and fibrous and suitable as specimens only, however compact gem material does exist in smaller quantities which polishes into superb gems. It has been mined in commercial quantity for industrial use in Nevada, and Arizona produces a lavender colored material, some of which is fine gem quality.



WORLD NEWS

ON
Mineral Occurrences

ITEMS ON NEW FINDS ARE DESIRED

PLEASE SEND THEM IN.

Abbreviations: xl—crystal
fl—fluoresces

xled—crystallized
ph—phosphoresces
xline—crystalline

ALABAMA — In the offices of James Miller Davis (architect), 211-212 Guaranty Savings Bldg., Montgomery, Ala., we saw a most interesting specimen, a $2\frac{1}{2}$ x $2\frac{1}{2}$ black tourmaline with green beryl and smoky quartz. The specimen came from an abandoned mica mine about 6 miles N/E of Ashland, Clay Co., Ala.

ALASKA — "I am sending you a few specimens and would like to know what they are. Since I've found so many, I'm sure they must be something."

"These come from Caribou Creek, Mile 107, Glenn Highway, but I have found them in the Knik and Matanuska Rivers, too—all in Alaska"—item dated March 8, 1960, from Mrs. Dana Niemann, Box 1315, Palmer, Alaska.

Some dark red round pebbles, averaging $1\frac{1}{2}$ " in diameter, were received. They are hematites. One hematite pebble had a few spots of whitish quartz.

ARIZONA — "The Glove Mine, from where the fine wulfenite crystals have been coming for years, has shut down as has the Defiance Mine at Gleason. Considerable material is still coming up from Mexico but the fine selenite and azurite of last year is finished, the truckers say. There is a lot of interest in collecting in this state regardless of the fact the big finds are not so common any more."

"The Glove Mine is located in Santa Cruz County, Arizona, near the little town of Amado, on the south side of the Santa Rita Range. It is a lead mine and there is some silver and gold but not

much. The ore is cerussite."—item dated Dec. 30, 1959, from George Bideaux, P.O. Box 2386, Tucson, Ariz.

ARKANSAS—The following item, dated Jan. 16, 1960, was sent in by Alfred J. Protas, Prop. of Dixie Minerals Co., 3405 Grand Ave., Fort Smith, Ark.

"Last week on Jan. 13, 1960 I made a trip to Murfreesboro (Pike Co.), Ark., and had about five hours to spare, so, I thought I would go out to the nearby Crater of Diamonds, that is the diamond mine, and look around. I found several very nice chunks of agate, a very nice crystal of amethyst and many beautiful pieces of jasper. About four hours later while looking I found a beautiful 15 point white diamond. I also met an old gentleman that had worked for the big company in the old days and he said he was the man that washed out the famous Uncle Sam diamond; I think this stone weighed 40 carats when found. On the same day a daughter of the old gentlemen found a three carat coffee colored diamond. The sun was out very bright and the temperature was about 70 degrees, and it had rained considerably the few days before and it was really ideal conditions for diamond hunting. I thought I would tell about this trip for I know how much other Rockhounds would have liked to be with me on this trip. The diamonds are there but it takes some pretty good looking to find them, and they are being found when weather conditions permit hunting for them. There was a very interesting story in the TRUE MAGAZINE, Sept. issue about the

Arkansas Diamond Mine. This is very interesting reading, and from all the facts I am familiar with I found it all to be true in the story in the TRUE MAGAZINE."

CALIFORNIA — "I am sending you a specimen of colemanite with realgar. It comes from the great open borax pit of the Pacific Coast Borax Co. in Boron (Kern Co.), Calif., out of the Mojave Desert. Recently I have taken some of these specimens back with me on a trip east and they went like hot cakes. Everyone was delighted with them and very interested. Hope you like it." — item dated March 18, 1960, from Jean's Minerals, 23201 Grandview, Chatsworth, Calif.

A 3 x 5 inch specimen of grayish colemanite was received. One surface was coated with bright red xline realgar. A very nice specimen with a pleasing combination of two minerals.

COLORADO — "I used to be a regular reader of R&M and a collector but somehow this business of making a living and raising a family has interfered a few years. Truthfully, its been more than a few—summer of '36 and again in '39 it was that I met you (the Editor).

"But now I'm at it again and I climb the hills just as often as the weather permits. Haven't found anything spectacular, only good representative specimens of Colorado minerals. Half the fun is the trip anyway. No matter whether it's back breaking climbs, biting snow squalls, or boiling sun, I forgive Mother Nature by Thursday at the latest and come Saturday I'm off again!

"Now these specimens under separate cover which I'm sending you. The smoky quartz crystals are grab samples of some 288 that were collected. I would be delighted to exchange specimens with collectors out of state as my present collection consists solely of minerals I've found here in Colorado." — letter dated Jan. 10, 1960, from Doug Graham, 4660 Bryant St., Denver 21, Colo.

Well, were we surprised at the assortment of fine minerals that were sent us by Mr. Graham. They consisted of:

Quartz: Beautiful, dark smoky quartz xls, loose, slender and up to 2 inches in length. They come from Mt. Antero, Chaffee County, Colorado (altitude of pocket where found over 14,000 feet). One stout, loose smoky quartz xl, 2 x 3 inches in size, comes from Devil's Head, Douglas County, Colo.

Microcline (feldspar): Nice loose xls, averaging 1½ x 1½ inches, apparently gray in color but all stained brownish, were received. These come from Devil's Head, Douglas County, Colo.

Garnet (spessartite): Small but gemmy, deep red lustrous xls in cavities of gray rhyolite. Locality is Ruby Mountain near Nathrop, Chaffee County, Colo.

Topaz: Small, colorless gemmy xls in cavities of gray rhyolite. Also comes from Ruby Mountain near Nathrop, Chaffee County, Colo.

Zircon: Opaque, dark brown xls on massive smoky quartz. Fl. orange. The specimens come from Eureka Tunnel (an abandoned mine tunnel) near the N/E base of St. Peter's Dome, El Paso County, Colo.

CONNECTICUT — "Enclosed is a piece of ilmenite, or what I think is ilmenite, which I dug up last fall looking for kyanite at Roxbury (Litchfield Co.), Conn., under those high tension power lines. Along with the kyanite and chlorite in milky quartz was a streak of this ilmenite about six inches in length." — item dated Feb. 7, 1960, from Harvey Bailey, Plainville Ave., Unionville, Conn.

Yes, the specimen is ilmenite — a black, platy mass.

DELAWARE — Dark green pebbles of hornblende have been found loose in the soil 2 miles west of New Castle, New Castle Co., Del.

FLORIDA — "I've sent you 2 specimens of gray flint with xls that I found in a limestone mine 10 miles north of Ocala (Marion Co.), Fla." — item dated Feb. 4, 1960, from Cal Callaway, Callaway's Rock Shop, 13 N. Pine Hwy. 441, Ocala, Fla.

The specimens consist of white, drusy masses of stalactitic quartz in cavities of dark gray flint. Small veins of pale brassy-yellow pyrite are present in the flint.

GEORGIA — In the Winter 1959 issue of Georgia Mineral Newsletter (Published quarterly by the Georgia Geological Survey, Agriculture Building, 19 Hunter Street, Atlanta, Ga. — A. S. Furcron, Editor) appear several items by Garland Peyton, Director, titled — "Geological Investigations in Georgia, 1959" (p. 73). These items are:

"Search for Platinum in Georgia. Platinum has been recognized in samples from several places in Georgia.

"Minerals and Mineral Localities. For many years the Survey has published numerous reports and bulletins referring to these minerals and many of the bulletins are on specific minerals which are of economic value. Also, geologists have filed with the Survey numerous references to many mineral localities. It is planned to gather this information into a book which will be useful to the miner, mineral collectors and others interested in the mineralogy of the state (Georgia).

"Museum. Shortly after moving into our new quarters on the fourth floor of the Agriculture Laboratory Building, 19 Hunter St., S.W. (Atlanta, Ga.), it was planned to develop a mineral Museum. This project is now well under way and ores, rocks, gem materials, and fossil specimens are on display. It is planned to add continuously to this museum over a period of years."

Editor's Note — When the Editor of R&M visited Atlanta, Ga., some 20 years ago, the Mineral Museum was housed in the State Capitol and what minerals! Many were extremely beautiful, well cut or of gem quality, and all nicely displayed. And what an assortment too! If

the Museum then was worth a trip from New York, what must it be now? The Editor must make another trip to Atlanta to have a look-see at the Museum. This trip will be made this year, God willing.

HAWAII — Small black flakes of biotite have been found in a gneiss boulder near Young Street in Honolulu, Oahu Island, Hawaii.

IDAHO — "Am sending a chunk or two of rock at the suggestion of Ken Kyte of Covington, La. He and I have a friendly dispute as to what mineral or minerals form the inclusions in said rock.

"I say the material is a rhyolite porphyry with adularia feldspar inclusions. Ken states that perhaps the inclusions are quartz. We would appreciate any help you could give us.

"The material comes from Silver Creek, about 20 miles on the Morgan Creek Road (toward Challis) from Cobalt (Lemhi Co.), Idaho. The area in which this rhyolite occurs is quite small (relatively). My opinion is that it is a volcanic dike, altho I'm not a school trained geologist by any means. The rhyolite is also the country rock for some very nice agate.

"Ken and Jud Locke (of Gulfport, Miss.), wrote that you had been down in their part of the country and did some rock hunting (by boat) and had a good time. Being stuck on the very edge of the primitive area of Idaho, I can't imagine hunting rocks with a boat. Sure would like to get down there and give it a try." — letter dated Dec. 29, 1959, from Bill Robbins (Bill's Rock Shop), Cobalt, Idaho.

The material is not a porphyry but massive rhyolite full of tiny, colorless, glassy sanidine in square prisms or in slender elongated prisms. All the sanidine show a beautiful bluish opalescence. Some colorless quartz also present.

The large, 2 x 5, brown rhyolite has one surface of brown botryoidal chalcedony. Part of this chalcedony has a very

thin coating of some soft bluish material (possibly a clay). This rhyolite also has sanidine and quartz.

Three specimens were received. One was brown rhyolite (mentioned above), another pinkish rhyolite, and the third, red rhyolite. All contained sanidine and quartz.

ILLINOIS — "I note in the Sept-Oct 1959 issue of R&M that you need items on Illinois for World News section and as I have found some nice material here in Shelby County, Illinois, I am sending along some to you in the hope that you may find it interesting enough to warrant mentioning.

"This material is a calcite fossil flora limestone in a tufa-like state containing areas of whitish calcite with a nice response to the long or short wave U.V. lamp in a matrix of plainly defined plant life. I believe that the fluorescent aspect of this material makes it rather an unusual occurrence.

"Now to its location. I found a large boulder deposit last fall (1959) as I was collecting crinoid fossil plates from the glacial deposit south of Shelbyville, Ill., and upon noticing sections of massive calcite on the surface of the boulder I investigated and found the whole boulder made up of fossil plants. I then engaged a man with a bulldozer to get the material out, after of course making satisfactory arrangements with the landowner, and had the material brought to my home. The fluorescence of the calcite proved very interesting and I have traded with many rockhounds and received fine appreciative comments. To my knowledge there is no more of the material in the area and it probably can be considered an erratic occurrence of hot spring action. The location of the boulder when found is 3 miles south and west of Shelbyville, Shelby County, Illinois." — a recent letter from Noble Price (Price's Gun House), Pana, Ill.

Three specimens were received, one was a 3 x 4 inch slab of fossiliferous

chocolate-brown limestone with veins and small rounded areas of white calcite. Another specimen consisted of platy, pale amber-yellow calcite in chocolate-brown limestone. All the calcite fl. a cream-color under long wave and a beautiful pale yellow under short wave.

INDIANA — "For some time I have intended to send you some specimens of glacial drift rocks from this area and probably would have never gotten started had not a friend of mine handed me a piece of mineral and asked me what it was. This is sent you under separate cover. What is it? — letter dated Feb. 20, 1960, from Ora R. Kuhlman, 4125 Warsaw St., Fort Wayne 5, Ind.

The specimen is a thin slab (one face polished) of a beautiful black granite showing brassy-yellow pyrite, smoky quartz, and chatoyant labradorite (has elongated patches of a bronzy color).

IOWA — "Last summer (1959) I did some collecting around Lowell (Henry Co.), Iowa and found a large geode weighing 76 lbs. (12 x 14 inches in size.)" — a recent letter from James Smedley, Box 242, Follansbee, W. Va.

KANSAS — John W. Gholson, 2155 So. Waco, Wichita 11, Kans., has presented R&M with some loose, brown to dark brown limonite pseudo after magnetite xls. The xls were found near Lincolnville, Marion Co., Kans.

KENTUCKY — "Along the lower end of the road cut in Muldraugh Hill — on Highway 31-W, which goes through the reservation (Fort Knox, Hardin Co., Ky.), — and on the east side of the road, one can find geodes containing quartz and calcite xls, and some containing chalcedony." — note from Sfc. William J. Malarkey, 962-D Kennedy Courts, Fort Dix, N. J., who was stationed not long ago at Fort Knox.

LOUISIANA — Ken Kyte, Box 161, Covington, La., has in his collection a 4 x 10 inch slab of brown jasperized wood which he had found in a gravel pit north of Alexandria, Grant Parish, La.

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ALS

MAINE — "I found some gold in a schist ledge on Little Chebeaugh Island, Casco Bay (Cumberland Co.), Me. I didn't find much but it's gold! Found Sept. 19, 1959." — recent item from Kent Thurston, Mousam Rd., Springvale, Me.

MARYLAND — From a quarry in Cabin John Valley, off River Road, Montgomery Co., Md., we have a specimen of green chlorite schist full of tiny, lustrous, brassy-yellow pyrite xls. The specimen was sent in by Robert B. Houston, Jr., 5133 Worthington Dr., Washington 16, D. C.

MASSACHUSETTS — "In Andover, Massachusetts, and vicinity, I have found some minerals which I believe have never been found here before. Road cuts, for the new route 28, exposed some pegmatites, some of which extend into Tewksbury and Wilmington, Mass., towns south of Andover. The pegmatites occur in gneiss and granite native to the region. The minerals are those typical of pegmatites and are as follows:

Garnet. Found in every rock, very coarse. In Wilmington, 2 miles south of Tewksbury St., Andover, you may reach the rocks by turning west from the Howard Johnson's near the Andover-North Reading town line, and by leaving this road at the new 2 lanes. The rocks are right there between the north and south lanes with a telephone pole on them. Until this way is open, you may get on the new 2 lanes from Lowell or Dascomb Roads and drive south about 3-4 miles from Lowell St., and about 2½ - 3 miles from Dascomb Rd. The rocks come just before the overpass.

Pyrite. Found in the rocks north of Osgood Street. They may be reached by coming up Osgood St. from the east and walking north about 200 yds. on the new 28, or by going 1,000 yds. south of Lowell St.

Muscovite. Very coarse from the Osgood rocks (near the pyrite locality) and the rocks near Dascomb Rd. Both the Osgood rocks and the Dascomb rocks are on the west side of the new 28.

Biotite. In all rocks but the best is from Wilmington and from small glacial (native?) boulders near the Dascomb rocks.

Apatite. In all pegmatites, coarse from Wilmington, and the "dump" which are boulders which were probably blasted from the Wilmington rocks. The dump is about 200 - 300 feet south of Tewksbury Street, Andover.

Beryl. In pegmatites from Dascomb and Osgood. Some altered.

Quartz. Some crystals from Dascomb.

Tourmaline. In rocks from Dascomb and Osgood.

Columbite. One good specimen from Wilmington. Minute amounts from Dascomb and Osgood.

Autunite. In every rock as invisible amounts. Good from Dascomb and the dump.

Uranophane. At the dump.

Pyrophyllite. Osgood.

"There are cuts on Tewksbury and Dascomb Streets but the minerals are inferior to those on the new road.

"I have found some unidentified minerals, too.

"If any collector should visit these rocks would he please report his findings to me as I am recording everything found there." — letter dated April 3, 1960, from Edward S. Grew, Phillips Academy, Andover, Mass.

Andover is in Essex County in N/E Massachusetts.

MICHIGAN — An attractive copper mineral from the copper mines of Upper Michigan was sent us by Lyle De Rusha, Rt. 1, Chippewa Falls, Wisc. The specimen is a turquoise-blue chrysocolla encrusting reddish basalt and comes from the Alluaume Copper Mine at Ahmeek, Keweenaw Co., Mich.

MINNESOTA — Lustrous black xls of hypersthene have been found in a large boulder in a gravel pit near Moose Lake, Carlton Co., Minn.

MISSISSIPPI — Jud Locke, 39-48th St., Gulfport, Miss., has in his collection a white, opalized wood that is 15" long and 6" diam. — a cavity in this specimen is full of small, white stalactite quartz. This fine specimen was found by Mr. Locke in the Wolf River, N. W. of Gulfport, Harrison Co., Miss.

MISSOURI — "I'm writing for my husband, Harry Graham. He recently started making jewelry from the red Ozark agate found in the Cotter Formation about 9 miles north of Warsaw (at Lincoln, Benton Co.), Mo. He is sending you a key chain with one of the Ozark agate tumbled stones. Please note the beautiful colors in this one stone. We have found every color I've ever seen in stones; ranging from blues and lavenders to purple—from a delicate pink to dark red and pale yellow to vivid orange and browns. A few have shades of green, but this color seems to be rather rare. Some black, too.

"The Cotter Formation is almost on Hiway 65 and out east of Lincoln, Mo., you can take the county roads and find it lying along the ditches and in the center of the roads. It ranges in size from small 'tumbling' pieces to large geodes. Even the fossils have this exquisite agate inside and as a rule have a white coating.

"Harry started out just securing pieces of the agate for his rock and mineral collection, then decided to make jewelry as a hobby. Its now developed into a sort of part-time business and he hopes of course to go ahead on a large scale.

"This Ozark agate takes a high polish and we often find very wonderful pictures in it. A gem shop has opened in Lincoln, Mo., and they call the agate Mozarkite, after Missouri Ozark Agate." — item recently received from Mrs. Harry Graham, RR 3, Box 23, Warsaw, Mo.

The silver key chain with its attached Ozark agate is a most appreciative gift. The 1 1/4 inch tumble-polished agate is a beautiful stone — dark reddish in color and is a mottled combination of

red and yellow jaspers with dark bluish-gray chalcedony.

MONTANA — "I am sending in separate package a few polished pebbles which may be of interest.

"These pebbles occur in an outcrop (or deposit) of cobbles or iron claystones in the Devil's Canyon Country in the north end of Wibaux County, of eastern Montana.

"These pebbles are coated very heavily with hematite and take a long time to tumble polish. I have been told some of them are quartzite.

"They were scooped up from the surface. I hope to examine the locality more thoroughly this summer." — item dated Feb. 3, 1960, from Hjalmar Johnson, prop. Lost Cabin Trading Post, Wibaux, Mont.

Some beautifully tumbled polished pebbles were received which varied in size from 1/2 x 1/2 up to 1 1/2 x 3 inches. Grayish quartz, (some stained red by iron), bluish-gray chalcedony, and red jaspers (one was olive brown) were the pebbles received. No quartzite in the lot.

NEBRASKA — "Within the next few days I will send you a specimen of a Nebraska geode. I don't know whether you have ever seen a Nebraska geode or not but they are quite good specimens. Most have calcite crystals. They are all very thin shelled and for the most part they are under 2 inches in diameter. They are found in a hard shale-like material which makes them very hard to remove without breaking. They come from near Beatrice in Gage County, Nebraska, along the banks of the Blue River.

"I have duplicates of these geodes and would be very glad to trade them with anyone who likes to trade." — a recent letter from Charles M. Schafer, 6310 Military Ave., Omaha 4, Nebr.

Several geodes were received, 1 1/2 inches in diam., whose interiors are full of beautiful, tiny, colorless calcite xls.

NEVADA — In White Canyon, White Pine Co., Nevada, gold nuggets ranging in value from \$2.50 to \$10

were found when the locality was placer mined for gold.

NEW HAMPSHIRE — The following item, dated March 14th, 1960, was sent to us by Ralph C. Gosse, Albany, New York.

"The brother of a friend of mine made a rather interesting find last year while he and his family were vacationing at Hampton Beach (on the Atlantic Ocean), Rockingham County, New Hampshire. Before he left on vacation, his brother asked him to keep an eye-out for any unusual stones for him. Although the vacationing brother is not personally interested in minerals and has no knowledge of them, he obliged by filling a small carton with various stones from the beach. With the exception of one stone, all were common rock of no mineralogical value. However, the one stone was a very beautiful mass of fine gem quality jasper weighing several pounds. The coloring and markings were arranged in a pleasing manner, consisting of veinlets and spots of intense red and orange hues in a white background. On examining this specimen, I found that it showed very little rounding, retaining a vein-like shape, which may indicate that the deposit or vein is in the immediate vicinity. Anyone planning a visit to this vacation spot or residing near Hampton Beach, may be able to secure some of this beautiful gem material."

NEW JERSEY — "The enclosed specimen was found in Sayreville (Middlesex Co.), N. J. Is it petrified wood?" — item dated Jan. 20, 1960, from Miss Helen McDonnell, 2927 Bangs Ave., Neptune, N. J.

A 1 x 2 inch, thin, dark brown slab was received. It is not petrified but limonized wood (Limonite pseudo after wood).

NEW MEXICO — Quartz xls coated with whitish opal occur in the San Simon district, Hidalgo Co., N. Mex.

NEW YORK — Nice rock xls have been found in the huge limestone quarry at Jamesville, Onondaga Co., N. Y.

NORTH CAROLINA — "I am enclosing 3 specimens of prehnite, or they may be chalcedony, which were found in a vacant field on Seymour Johnson AFB, 3 miles from Goldsboro (Wayne Co.), N. C. Will you identify them for me, please?" — item dated March 29, 1960, from Gregory Baird, 805 Fehet St., Goldsboro, N. C.

The specimens are all massive green epidote, two are associated with massive smoky quartz, the other one with pinkish microcline.

NORTH DAKOTA — Milky-white massive quartz occurs around Hurdsfield, N. D., as per sample received from Florence Newsom, Hurdsfield, N. D. Hurdsfield is in S. W. Wells County which is in central North Dakota.

OHIO — "Under separate cover we are sending you a mineral specimen which we would like to have identified. It came from the Maple Grove Quarry, Maple Grove, Seneca Co., Ohio." — item dated April 11, 1960, from Mr. & Mrs. Clarence Carey (Carey's Rock Museum), P. O. Box 66, Collins, Ohio.

The specimen consists of a light blue celestite xl on whitish xld selenite.

OKLAHOMA — "Sand xls have always been a mystery to me. How the crystals can form, including the sand grains, and keep the original shape of the mineral, is more than I know. An interesting example of this are the sand calcite xls of South Dakota that grow in grey sand. Then there's the barite crystals of Oklahoma that bend the barite around the red sand grains to form a perfect rose. Of equal interest are the odd and unusual sand celestite xls found a few miles south of Weatherford in Washita Co., Okla. These grow in a brownish color sand and though small they keep their shape and form. I'm sending a few clusters for your collection. You will know more about the sand than I. I'm wondering if there are other crystals that form in sand. I would be interested in hearing from other collectors." — letter dated Feb. 24, 1960, from Mrs. Marie

Kennedy, 737 West Kansas, Blackwell, Okla.

The specimens received are clusters of rough celestite xls 1½ x 1½ inches in diam., apparently of a grayish color, but coated brown by a heavy crust of brown sand. Very, very interesting.

We hope readers who may know of other types of sand xls will answer Mrs. Kennedy's request.

OREGON — From Mrs. Inez O. Rogers, P. O. Box 184, Oakridge, Ore., we have a 2 x 2 inch section of petrified wood whose center is a bluish-gray chalcedony (slightly banded); outside surface is a dark reddish chalcedony.

"I have a reasonable amount of this bluish-gray petrified wood, if anyone wants to trade. It comes from Stony Creek Logging Road, 10 miles out of Oakridge, Lane Co., Ore." — note from Mrs. Rogers.

PENNSYLVANIA — "Enclosed you will find 3 small specimens. They were found in a limestone quarry near York (York Co.), Pa. They are:

1. Minute white dolomite xls with colorless calcite xls and brownish ankerite xls on brownish limestone.

2. Dark brown xled ankerite on pale pinkish limestone.

3. Curved rhombohedral cleavages of brown siderite with colorless calcite on pale pinkish limestone.

This is the first report of siderite I have heard of from this quarry." — item dated Feb. 3, 1960, from John J. Klunk, 354 Penna. Ave., York, Pa.

RHODE ISLAND — "Enclosed is an article from the Sunday, Providence, R. I., *Journal*, May 8, 1960. You will probably recognize the Conklin Quarry which you visited to try to find specimens of bowenite." — item dated May 8, 1960, from Joseph A. Bouvette, P. O. Box 1803, Fall River, Mass.

The article is a most interesting one. It is titled "Limestone Quarries have old R. I. history" and was written by Lawrence M. Howard. Rhode Island is mineralogically famous for its quarries, many of which have been visited by the Editor

of R&M. The Conklin limestone quarry at Lime Rock, Providence Co., R. I., is still in operation (the only one in the area). The Editor remembers his visit to the Conklin quarry, where he found only one specimen but what a specimen — a nice 2 x 3 apple-green bowenite on bluish-white limestone, the first and only bowenite he had ever found! Bowenite is a massive serpentine of a very fine granular texture, and so resembles nephrite that for a long time it was thought to be nephrite. It was first found in Smithfield, R. I., over 100 years ago and was named after G. T. Bowen who analyzed it.

SOUTH CAROLINA — "I am sending you a specimen of petrified wood from Bellyache Creek near Darlington (Darlington Co.), S. C. It is a different color combination from the first piece sent you." — item from Frank L. Sims, 750 "B" Ave., West Columbia, S. C.

A 1½ x 3 inch grayish-brown specimen was received — nicely sawed and nicely trimmed. We are delighted with it. The previously received specimen was a dark gray banded with brown and white (see March-April 1960, R&M, p. 120).

SOUTH DAKOTA — "I am sending you a specimen of septarium with both yellow calcite and several crystals of golden barite on it. I collected this specimen in Elk Creek, north of Wasta (Pennington Co.), S. D. I collected the specimen last summer (1959) while on a collecting trip." — recent letter from Donald B. Pitcher, 3 Spruce St., Owego, N. Y.

The 2 x 2 inch specimen is a beauty — a thick crust of yellow, drusy calcite on dark gray septarium. Five small, golden gemmy barite xls are embedded in the calcite.

TENNESSEE — "Under separate cover I am sending you a specimen which I found in a deep road cut at the top of a hill some 4000 feet high in north Tennessee on Route 41 out of Springfield, Tenn. What is it?" — recent letter from Jas. R. Davidson, 412 N. 7th St., Marshall, Ill.

The 2 x 2½ inch specimen is a quartz geode whose interior is lined with whitish drusy calcite and quartz xls.

Springfield is in central Robertson County not far from the Kentucky border.

TEXAS — "We are sending you some samples of material we find near Helena (Karnes Co.), Texas, on the highways and in the fields around the small village. We always get permission before going into the pastures there. Some of the rocks have definite rattlesnake and lizard skin markings. Therefore we call them rattlesnake or lizard skin. Some rockhounds call it cycad, as it is a fern. It polishes nicely and we have made lovely jewelry of it, also bookends of the larger pieces." — item dated March 28, 1960, from Ben and Ruby Palmo, Box 668, Luling, Texas.

The material received is all cycad, a fossil fern replaced by chalcedony of various colors such as blue, gray, brown, reddish, and white. They average 2½ x 2½ inches in size. The white chalcedony fl. green under long wave UV light. It is all interesting material and most of it is of good gem quality (should take a nice polish).

UTAH — "Black agate locality. Take U. S. 91 to Levan (Juab Co.), Utah, State 28 to Gunnison. Approx. 13 miles from Levan take dirt road to east. At .7 to 1 mile you should be in area. Found on ridges and in draws to right after passing shed, corrals and reservoirs." — courtesy of Ken Stewart's Gem Shop, 37 South West Temple, Salt Lake City, Utah.

VERMONT — Milton E. Ailes, Box 36, West Danville (Caledonia Co.), Vt., has sent in an interesting pebble from his area. It is a 2 x 4 inch dark green hornblende which is deeply pitted and contains a thin vein of brownish garnet, also tiny masses of bronzy pyrite.

VIRGINIA — Small black magnetite xls are found in the Arlington quarry at Goose Creek, near Leesburg, Loudoun Co., Va.

WASHINGTON — "We visited one of our old favorite hunting grounds this past summer (1959) after 10 years ab-

sence. The realgar-orpiment location near La Conner (Skagit Co.), Wash., which I reported many years ago is now almost a memory. The sides of the hill has sloughed off over the outcrop and would take a lot of work to expose it again. The botryoidal strontianite that used to be so plentiful in the mine and on the dumps has been reduced to a few small pieces of the mineral." — letter dated Jan. 5, 1960, from Mrs. L. R. Haggard, 6525 - 196th St., S. W., Lynnwood, Wash.

WEST VIRGINIA — Nothing to report as no notes have been received from readers.

WISCONSIN — Brown limonite pebbles have been found in a dry wash 1 mile south of Chaseburg, Vernon Co., Wisc.

WYOMING — Brownish, drusy quartz on brown jasper has been found around Medicine Bow, Carbon Co., Wyo.

ARUBA — This is a small Dutch island in the West Indies (Netherlands Antilles). From Aruba we have a massive smoky quartz specimen full of cavities. In some cavities are tiny smoky quartz xls. Specimen was sent in by Bill Learned, Box 566, Lago Colony, Aruba, Netherlands Antilles.

Aruba is an important oil-refining center.

CANADA — At the Eastern Federation Convention held in Boston, Mass., last year we met (on July 16, 1959) a geologist, Philip C. Bate, Kilmar, Que., Canada. Mr. Bate told us about finding calcite crystals in a large vug in a magnesite mine, said he:

"The whole vug was lined with rhombohedral calcite crystals up to one inch in size. They were a very light brown to white in color (mildly fluorescent) and covered with minute pyrite crystals in many places.

"The vug is located on the 850 ft. level of the Kilmar Mine in Kilmar, Que., Canada. This mine belongs to Canadian Refractories Ltd. and produced dolomitic magnesite for refractory brick."

This item got mislaid — hence the delay in printing it. Our apologies are extended to Mr. Bate.

CZECHOSLOVAKIA — John S. Albanese, P. O. Box 221, Union, N. J., sent in a most attractive specimen — a group of lustrous, glassy pale amber barite xls.

"Barite, Anna Mine, Pribram, Bohemia (Czechoslovakia) — on label."

ENGLAND — Another attractive specimen was received from John S. Albanese, P. O. Box 221, Union, N. J. It consists of a dark red massive hematite coated with drusy, tarnished lustrous pyrite.

"Pyrite on hematite. Egremont, Cumbeland, England." — on label.

GREENLAND — On the Western coast of Greenland at Sarquaq (south of Umanak), very clear and transparent, loose rock crystals have been found.

IRAN — From Iran (Persia) we have an interesting variety of hematite, sparkling, gray, hematite schist called itabirite.

"Hematite, variety itabirite. From an island in Gulf of Ormuz, Iran (Persia)." — on label of specimen which was sent in by John S. Albanese, P. O. Box 221, Union, N. J.

JAPAN — The oldest quartz crystal locality in Japan are the granitic regions around Kimpuzan (Kimpuzan Mountain), Kai Province, Honshu Island. From this region beautiful colorless and transparent rock crystals have been obtained for centuries.

SCOTLAND — A beautiful pale green, botryoidal prehnite, was sent in by Sandy Ramsay, 1015 Aikenhead Road, King's Park, Glasgow S4, Scotland.

"From Boyleston quarry, Barrhead, Renfrewshire, Scotland." — on label.

SPAIN — "The most famous silver mines in Spain are at Hiendelencina, Guadalajara Province, in central Spain. The mines were abandoned in 1928. The mines furnished allemontite, argentite, arsenic, arsenopyrite, azurite, barite, bournonite, bormargrite, calcite, ceragrite, chalcopyrite, dolomite, dyscrasite, embolite, fluorite, freieslebrite, galena, gold, graphite, gypsum, hematite, limonite, malachite, miargyrite, proustite, pyrargyrite, pyrite, pyrrhotite, quartz, siderite, silver, sphalerite, stephanite, sternbergite, stibnite, tetrahedrite and other minerals." — item sent in by Juan Montal, Plaza Sgdo Corazon 1, Vilafranca del Panades, Spain.

INFORMATION WANTED BY READERS

SUBSCRIBER WANTS HELP

I would surely appreciate it if someone would help me with a few problems I am encountering.

1—On my vacation last year I encountered a Museum which contained all sorts of relics from the 1900 era. It was located on Michigan 26, in Keweenaw County, north of Hancock, Mich. The museum was on the right side of the road with a grocery store and gas station directly opposite. The owner's name was Al(?)

2—On my vacation this year, I am planning a Missouri-Arkansas vacation. Could anyone supply me with the names of localities, collectors, mineral shops?

3—I would be interested in obtaining a good rhodochrosite from Alma, Colo. Will trade or buy.

James Arent
4124 N. Menard
Chicago 34, Ill.

WHAT IS RED DOG

I am enclosing a piece of stone found in our area in slag piles from mines where it has

been burned. We call it Red Dog. Is there another name for this rock, or what classification does it fall into?

Not all slag piles have hard enough rocks, it is just certain ones.

Howard Johnson
Salisbury St.
Meyersdale, Pa.

Three small polished specimens were received. Two are dark gray (may have been shale), the other brown (may have been sandstone).

In Market for thin slabs?

I am in the market for about 10 sq. feet of slab rhodonite (light and dark, it doesn't matter), and some slabbed agate, especially the Mexican "Crazy lace." Slabs should be as thin as possible ($\frac{1}{8}$ inch is ideal) and as large as possible as I shall have to cut it up some for my purpose.

Mrs. J. F. Martin
553 Sheffer Rd.
Aurora, Ill.

Editor's Note: Get Mrs. Martin's O.K., before sending material wanted.

THE MICRO-MOUNTER

Conducted by Neal Yedlin—129 Englewood Drive, New Haven, Conn.

Letters and news come in daily. Some are of interest, and some are but individual queries, the answers to which are of no value but to the ones seeking the information. From time to time we print those that we feel are worthwhile.

From Walter Muffly, Wenatchee, Washington, who makes a note anent the zeolites from the Rock Island Dam, Columbia River, at Wenatchee, where a new mineral, paulingite, was discovered, and fine erionite, phillipsite, heulandite, calcite and filiform pyrite xls are found. (Am. Min. Vol. 45 Nos. 1 - 2. Jan.-Feb. 1960, at page 79) Mr. Muffly supplied the authors with material for analysis. The report in the Am. Min. indicates that the "zeolite bearing basalt forms large rounded boulders that appear to have been transported some distance."

Mr. Muffly writes as follows: "Their impression (the authors, Messrs. Kamb, W. B. and Oke, W.C.) that this material was carried there from up-river is in error. It was blasted out of the bedrock of the river. At this point, before the construction of the dam, the channel was narrow and the current too swift to allow any loose material to settle. I stood on this bedrock between the coffer dams before construction . . ."

For those of you who have specimens from this locality, the above pinpoints the location of the find.

The California Federation of Mineral Societies has established rules for the judging of competitive events at annual conventions. For award determinations in the micromount division the following table of percentages has been set up:

Quality of material	35%
Variety of material	10
Showmanship	15
Labeling	5
Workmanship	35
Total	100%

Now let's see. A breakdown shows that more points are awarded for the physical techniques displayed by the collector than for the mineral itself. Forty-five percent for quality and variety. Fifty-five percent for the carpentry and advertising. Now, while we have always gone on record as believing that an organization has the right to establish its own rules, nevertheless we do suggest the elimination of a situation where it is possible for a contestant to be declared winner by mounting 50 pieces of concrete. If his workmanship is superb, printing of labels perfect and his showmanship and presentation outstanding, he can conceivably win with 55 percentage points.

What we are trying to say is that in m/m collecting, as in all phases of mineralogy, the specimen is the thing. All else is subordinate, and should be considered and evaluated so. The Hope diamond in a cigar box, with a scrawled label, is still insurable for "X" dollars, and no amount of plushy containers, with glittering signs and fancy mountings, adds to its value. That it belongs in a remarkable setting and showcase goes without saying. But its value as a gem is not diminished by a deficient presentation.

We suggest, then, an adjustment, perhaps so:

Quality	40%
Variety and unusual characteristics	25
Workmanship	20
Presentation	15

We'd like to hear opinions on this, especially from members of the California group, as well as others.

H. Allan Mitchell, of 274 Ivy Pl., Ridgewood, N. J., has, perhaps, the finest micromounts of any we've seen. He has a small printing press and sets up each

and every label! But his specimens, too, are absolute tops in quality. He's constantly seeking new and better methods, and he's recently come up with this one, admitting that Bill Oke has used it for some time. When you have small isolated xls, or single xls that are affected by the loss or addition of water, use a plastic mount as follows:

Items needed:

5/8 inch plexiglass tubing.
 Plexiglass sheets, white and black,
 about 1/16 inch thick.
 Clear plexiglass sheet, or microscope
 slide cover glass.
 Fine sandpaper
 Plug cutter, 5/8 inch diameter.
 Plexiglass cement.

Very little material is needed. With the plug cutter cut some white, black and clear discs from the plexiglass sheets. Cut off about 1/4 inch from the tubing. Sand both edges. Carefully coat one edge with the cement. Place a white or black plug on the edge of the tube. The cement will dry in a few minutes. (Black plug if

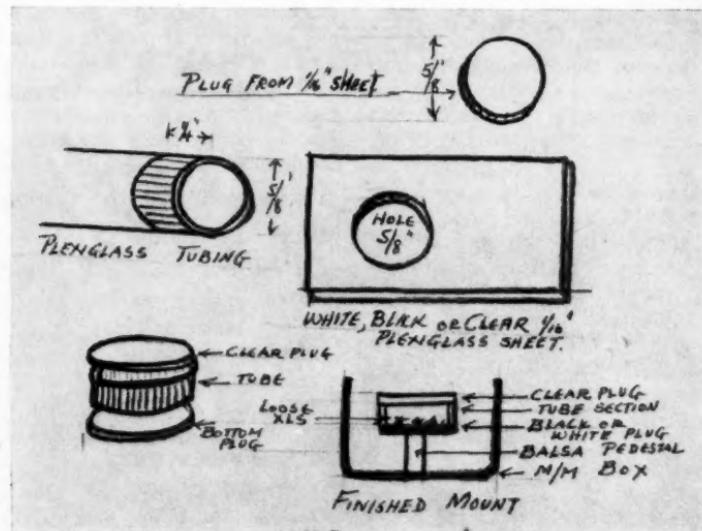
white xls to be mounted and vice versa.) Scatter your xls in the container now formed. Coat the other edge of the tube with cement. Place the clear plug, or cover glass on. Let dry. Mount this as you would any specimen, with pedestal, etc. The 5/8 inch diameter will go into the m/m box nicely. (See cut)

Try this for a mount holder. Made of 1 1/4" steel ball, with about 1/3rd cut away; a piece of brass "U", 1" x 1"; and a thin brass shim. Works fine. Permits placing specimen in any position for viewing or photography. For a base use a square of half inch plywood with a 3/4" hole drilled in it, or a large iron washer. (See sketch)

Notes and News

1. Addenda to minerals found at Thomaston, Conn.: Sphene, anatase, and greenockite.

2. Advice from Franklin and Ogdensburg Mineral Society: Bulletin No. 180, Minerals of Franklin and Sterling Hill, by Palache, no longer available, will be reprinted in its original form by the Government Printing Office. That a work



Plastic Mount

describing the discoveries since the first issuance of Bull. 180 is in progress.

3. Every mineral collector serious about his hobby will subscribe to the AMERICAN MINERALOGIST, to keep himself up to date. This is a world recognized authority on mineralogy. Address, The Mineral Society of America, Marjorie Hooker, treasurer, U.S.G.S., Washington, 25, D.C. \$4.00 per year.

4. In mounting m/m specimens, cement the mineral to the balsa stick first, then set to dry. Place up-side-down in the plastic box, marking on the balsa with a razor blade, the top of the box. Remove and cut at this point, or a shade shorter. Specimen will be at right height. Cement in place.

5. Never wrap specimens in absorbant cotton. Have you ever tried removing dozens of threads from acicular cuprite? If you do receive a specimen so contaminated, hold it in a forceps, and pass it quickly over the flame of an alcohol lamp. Three or four passes should suffice. No strain, no soot, no cussing and fuming, and the mineral will be clean.

6. Some of the boys buy both clear and black boxes, utilizing both. They switch

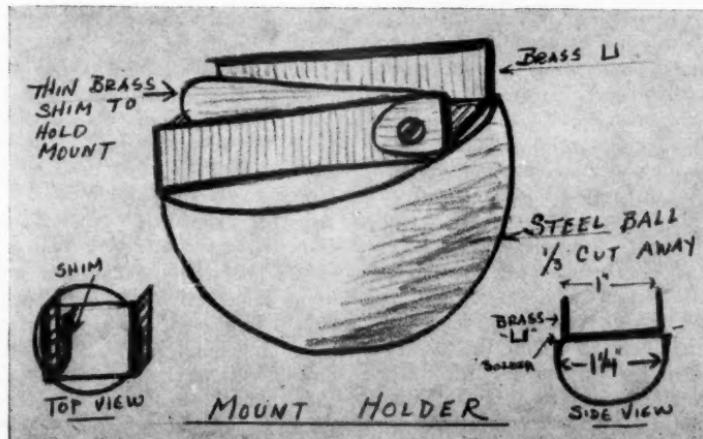
lids. The black box now has a clear top, and if the specimen is mounted on the inside of the black cover, the clear box acts as a top for it. Q.E.D.

7. James Allen, 322 W. 23 St., So. Sioux City, Nebraska, has a supply of "Bull Moose" (the locality, not the specimen) phosphates for exchange. Some will make superb m/ms. He's in a swapping mood. Collects cabinet specimens as well as m/ms, and has quite an extensive collection. Write to him.

8. Every collector worth his halite owns and uses a 10 power loupe almost constantly. Can't work in the field without it. Very satisfactory instruments can be purchased to-day for very little.

9. George C. Dick, Overland, Mo., has sent to us a folder of pen and ink drawings of micro xls he has observed under his 'scope. There are pictured 150 specimens, each a painstaking work of fine draughtsmanship. Every drawing is identified, locality given, magnification observed, with source of material and chemical formula included. To us this is a new phase of the micromounter's art. Many of us have gone in for photography in color. It has been a long time since we've seen such carefully and painstakingly hand-drawn reproductions.

10. Buy and use a good mineral book.



Mount Holder

A SCHOOL TRIP TO NEW JERSEY

By SAMUEL J. TUTHILL

Master, Science Dept., The Manlius School, Manlius, N. Y.

The essence of adventure is involved in competition with nature. The hobbies of mineral collecting and lapidary can give an imaginative youngster the means to a life long avocation, the introduction to a career, or a temporary activity to help carry him through the tough years of maturation. Every adult with knowledge should dedicate himself to the youth with interest.

Last spring I had, as I'm sure many of you readers have had before me, the exhilarating experience of spending a few days in the field with a group of eight high school boys who were dedicated to the idea of finding minerals, the rarer the better. I'm writing this because I feel that there are many teachers who read these pages and there are still many more thinking people who can encourage the educational authorities in their communities to attempt to get school children out of the General Science and Earth Science class rooms long enough to make what they study there really vital and important to them.

When I started thinking about teaching Earth Science for the first time, I had been collecting minerals for only a few months and was still a little hazy about the manner in which one distinguishes limestone from dolomite and around Syracuse, N. Y., that's about all we have! I did want to make the course interesting and profitable to my students, but at first it seemed a little hard to put much umph into Mohs scale or the crystal systems. With the encouragement of John MacDonald, Manlius' Headmaster, I offered the prospect of a four day field trip to Northern New Jersey as a prize for being among the top eight students in the combined Earth Science classes. Thus with a well baited hook, I started teaching and planning the trip. I was a bit worried about the latter as I was not acquainted with many of the

minerals or their best locations in Jersey, but it was September and spring was a long way off. My first step was to write Mr. Zodac and ask for help. An enthusiastic letter came back with the names of several R&M subscribers in New Jersey who Mr. Zodac thought might help. I wrote to them and things started to snowball quickly as I found that everyone who subscribes to R&M seemed to be a confirmed good Samaritan. In no time I had to cut the proposed itinerary in half as four days would not stretch quite as far as the proffered help would reach.

A very important asset to teaching, which the field trip contest provided, was the real and immediate reason for studying not only mineralogy, but geomorphology, historical geology, topographic maps, petrography, ore bodies, etc. The boys studied them because they were going to be valuable in the spring, not just on exams, but on an adventure too!

Spring arrived at last and I looked back wondering where the time had gone. I'd been trapped by my own "gimmick" and had taken a couple of geology courses at Syracuse at night so as to be a better guide on the trip and a better teacher in the class room. The eight boys who finished first were the envy of the losers, but one cadet who had come within a decimal of going, came to me and said he'd never have studied as hard had there not been a reason to do so. Although he'd lost he was still pleased with himself and had learned the pleasure of a well done job.

We headed south and east and seven hours later arrived in Mr. Larry Chapman's front yard. Now Mr. Chapman lives on Church St. in Franklin, N. J. and has one of the most spectacular front yards in the east, namely Buckwheat dump. I had been fearful that some of the people we'd meet would be "EXPERTS"—you know, the unknown quan-

ity for the X and a drip under pressure for the SPURT. I need not have worried for while all our new friends were experts, they were truly enthusiastic people and not one showed any condescension to us as we fumbled in ignorance on basic problems of mineral identification. After the Village of Franklin had welcomed us by waiving the customary dollar per person fee and allowed us to hunt on but a single pass our little Thames bus began taking on a load of rock which would make any mineral collector's heart beat faster. Mr. Chapman guided us in our selection and all the while pointed out the way in which the various species of minerals were distinguished. After several hours of collecting and many exciting finds, we visited Mr. Chapman's home where he introduced us to a beautiful collection of limestone breccia and a superb group of Franklin minerals. His enthusiasm for collecting and understanding minerals was of such a caliber that we had forgotten about not having had dinner. It was dark and we regretted having to leave as we headed toward Mount Allamuchy Camp at Waterloo, N. J., where we made our base for the next three days. The Morris-Sussex Area Council of the Boy Scouts of America had extended us the courtesy of using a rustic log cabin there and we not only enjoyed ourselves, but held down costs very appreciably.

After we had eaten, we got out the UV light and had a look at our day's collecting. The thrill of first seeing a truly fine collection of fluorescent minerals, which you have personally picked off a dusty rock heap, is something which is often recalled in memory.

The next day, this group of boys who had but a day before, been complaining about rising at seven A. M., were up and cooking breakfast before first light. Off we went to Sterling with a small hand drawn map of the Sterling Brook Carnelian site which had been provided us by Mr. Addis Kocher of Boonton, N. J. We arrived and started to search the stream gravel for agate. No luck. We spread out, still no luck. Someone found

a piece of carnelian the size of your little fingernail and efforts were redoubled. Hours seemed to drag by and no real finds were made. We worked all morning in ignorance and made no finds. I was beginning to pray for one of two possible "miracles," a tactful way to leave for another more hopeful site or a really good find. My prayers were answered in the form of helpful advice from a middleaged couple who had collected there before. They enthusiastically set us straight and while we were in Gillette having lunch we bought a shovel and were in business. By four we had several large pieces of fine quality carnelian and many "possibles" which later cut to beautiful "Picture Agate."

That evening we visited Mr. and Mrs. Kocher at their home in Boonton and saw his fine collection of minerals and cut gems. It was midnight as we pulled up to our cabin that night and I envisioned a mid-morning start and a diminution of enthusiasm next day. Quite the opposite was the case. They woke me up and hurried me off to New Street Quarry in West Paterson where prehnite, amethyst, rock xl and pectolite were obtained. In the afternoon Turkey Mountain yielded some of its gem serpentine (Montville, N. J.), and later we got Sunstone (Orthoclase with Hematite) at the Alan Wood Mine near Dover, N. J. A swim and a wonderful dinner as the guests of Mrs. Woodrow Obrig of Summit, N. J. (mother of one of the boys), and our trip was drawing to a close. The next morning we headed into the Delaware Water Gap for some geology and a look into the old copper mine near Columbia where we collected some malachite. Then off through the Scranton, Pa. area to home.

There was nothing spectacular about the trip and that's why I've taken pains to set this down. Any high school teacher could do it with the help that is available from mineral collectors anywhere in the country. I propose that every teacher of Earth Science or General Science should do it. The costs for nine of us—meals,

lodging, 780 miles of travel, and all fees and tolls came to under \$100. What are the benefits derived? Four of the boys and one who did not go are tailoring their high school courses to include as much science as they can get. They have started to study for a reason, and have learned that their efforts are their own greatest asset when it comes time to enter college. They may not become geology majors or even study science when they reach college, but they have become interested in the world in which they live and have learned that they are among very good company in their search for more knowledge. I suggest to each of you who have knowledge of minerals that you use your influence to encourage field study in your schools. An interested person will learn, an uninterested person cannot be taught.

Mineral Club Year Book

The Southeastern New Hampshire Mineral Club has produced its first Year Book (No. 1, 1959 — 27 pp.), under the able editorship of Mrs. Ellen G. Akers, whose early years in the Black Mt. and Swift River area of Maine, as well as school-teaching have indeed perfected her for the task.

Philip C. Foster, Club president and micromount specialist (he has 3,000 plus) provides a scholarly article on the surprisingly large number of minerals found within a hundred mile radius of the Club's headquarters (Dover, N. H.)—an even 250 species of minerals and 8 elements!

An interesting record of New Hampshire's mineral resources, by Clyde L. Smith, a past president, stresses the importance of this state in the production of feldspar, beryl, and mica, industrially and strategically.

Then there's a first hand account of the quest for topaz on South Baldface Mountain, with all the difficulties attendant upon the climb and the search—but the topaz is there!

Virginia Coyle gives a bit of the history of the quaint old town of Newcastle, in connection with the flint found so plentifully upon her beach, while Bart Kelly tells of the smoky quartz crystals in Lovejoy's Gravel Pit—but he has found no topaz, even with the help of his three "Pebble Pups"!

James S. Hutchins describes the locality of Vesuvianite, a famous mineral from the neighboring state of Maine; and another past president, Edward Nevison, who works tirelessly with young people to start them on the road to mineral collecting tells of finding a most interesting pebble in a gravel pit in Springvale, Maine—fluorescent calcite and willemite, comparable to Franklin material.

Katherine Howe, who in her childhood collected fossils in her Kentucky dooryard, describes the unusual and rare crystals now in her possession, collected by a famous man once in the U.S.D.A.

The Club emblem of mineral hammer against the outline of the state of New Hampshire was designed by Mary White.

Production was in the capable hands of Albert Lord, Jr.

Evelyn B. Blake, Sec.
S.E. N.H. Mineral Club,
Kittery Point, Me.

Clubs wanted for Lexington, Mich.

We are hoping to start a Rockhound Club in this area but we are all unfortunately new at this hobby. Any suggestions readers might care to make will be greatly appreciated.

Rev. J. M. Hill
Box 1
Lexington, Mich.

The New York Mineralogical Club, Inc.

At a recent election of the New York Mineralogical Club, Inc., held at Columbia University on April 20, 1960, the following officers were duly elected:

President: Neal Yedlin
1st Vice President Joe Rothstein
2nd Vice President Joseph Stromwasser
Secretary Thomas Ronan
Treasurer Carl Krotki

Mr. Yedlin, the new president, has served in this capacity for two previous terms (1951 thru 1953). A club member since 1933, he has been extremely active in its affairs, and was one of the incorporators when the club became a membership corporation under the laws of the State of New York.

He has specialized in micromount mineralogy. His collection numbers over 6600 individual specimens, all mounted and in crystals. Some 667 valid species are represented.

Mr. Yedlin has been a frequent contributor to ROCKS AND MINERALS, and since 1948 has conducted the popular column "The Micromounter" in this periodical. His influence has developed the micromount art from one where the participants were few and far between to the present great enrollment, wherein literally thousands participate and enjoy this phase of mineralogy.



THE SAND COLLECTOR

CONDUCTED BY PETER ZODAC
PEEKSKILL, N. Y.

Lava sand from Picacho Peak, Ariz.

Some months ago we received an interesting sand sample from Robert D. Beale, R3, Box 24, Odell, Ill., but due to an oversight it got overlooked. The sample is a medium grained, dark grayish-brown sand consisting chiefly of dark grayish-brown lava (many grains pitted) with some black magnetite (rusty brown surface) with a few grains of green epidote.

"I am sending a sample of sand. It is from Picacho Peak, Pinal Co., Ariz. This peak is of volcanic origin. I believe the only battle of the Civil War in the West was fought at this peak."—on label.

Gold sand from Chicken, Alaska

In 1955, Will and Gerry Shulman, 47 Falcon Rd., Livingston, N. J., toured Alaska (see their article, "Hunting the R&M subscriber in Alaska", R&M, March-April 1957, pp. 115-123) and collected many sands and minerals. They sent us a sand sample which in some manner got mislaid and we just ran across it. The sample is a fine grained, black sand consisting chiefly of black lustrous magnetite with many flat grains of yellow gold.

"Gold sand from Lost Chicken Hill mine, Chicken, Alaska,"—on label.

Cave sand from Hurricane Cave, Ark.

Mrs. John McCarty, 5824 E. 12th St., Kansas City 26, Mo., sent in an interesting sand. The sample is a medium grained, buff colored sand consisting of white and buff colored calcite and a tiny amount of colorless quartz.

"The sand comes from an underground river in Hurricane Cave, 16 miles south of Harrison, Newton Co., Ark."—on label.

Creek sand from Mill Creek, Calif.

Frank Waskey, Oakville, Wash., sent in an interesting sand sample which he himself had collected. It is a coarse grained, gray sand consisting chiefly of quartz (milky, smoky) and feldspar (pink, white) with minor amounts of black biotite, green epidote, and black magnetite (some of the magnetite is embedded in quartz and in feldspar).

"Recently concentrated sand from mouth of Canyon of Mill Creek, tributary of Santa Ana River, San Bernardino Co., Calif."—on label.

Geode sand from near Waterloo, Iowa.

Iowa is famous for its geodes and so geode sand should be common but the first geode sand from Iowa we ever saw was the sample recently sent in by Don H. Erpelding, Rt. 3, Waterloo, Iowa. The sample is a dark gray, medium grained sand consisting entirely of smoky quartz. The sample was found in a geode which comes from a large pit near Mr. Erpelding's home which is 8 miles east of Waterloo, Black Hawk Co., Iowa.

Zircon sand from Kent Island, Md.

Kent Island, the largest island in Chesapeake Bay, belongs to Queen Anne County, Md. It is 15 miles long and the site of the earliest settlement in Maryland. From Kent Island we have an

interesting sand sample that was collected for us by Harold Post, P.O. Box 2, Chesterfield, N. H.

The sample is a fine grained, lustrous black sand consisting chiefly of black lustrous ilmenite, with a smaller amount of colorless zircon, (fl. orange) and a tiny amount of pink garnet, black magnetite, and colorless quartz.

"Sand from beach on Kent Island (Love Point, north tip of Island), Md."—on label.

Zircon sand from Avalon, N.J.

From Avalon, which is on the N.E. tip of a long island of eastern Cape May County, N. J., we have an interesting sand sample that was sent in by D. K. Chalmers, 1644 Oak Ave., Haddon Heights, N. J.

The sample is a fine grained, gray sand consisting chiefly of colorless zircon (fl. orange), colorless quartz, and black ilmenite, with small amounts of green epidote and black magnetite.

Magnetite sand from Ontario, Canada

"I am sending you a sample of sand collected a few years ago by a friend of mine, a former Bush Pilot, who flew all over the bush country from Kenora north to Hudson Bay.

"This black sand comes from the beach of a small lake in the Red Lake Mining District about 90 miles northwest of Sioux Lookout, Canada."—item sent in recently by Jas. A. McDonald, 63 Gilmour Ave., Toronto 9, Ont., Canada.

The sample is a fine grained, lustrous black sand. It consists chiefly of lustrous black magnetite, with smaller amounts of green epidote, red garnet, and colorless to brownish quartz.

The Red Lake Mining District is in western Ontario, Canada.

Beach sand from Bornholm Island, Denmark

Bornholm, the 4th largest island of Denmark, is in the Baltic Sea, 92 miles east of Zealand (or Sjaelland—the largest and most important island), and



THE BEACH AT RAVENSCRAIG, KIRKCALDY.

B.2487.

The beach at Ravenscraig, Kirkcaldy, Scotland.

22 miles from the southern extremity of Sweden. It is 24 miles long and 18 miles wide.

From the beach at Salene Bugt, on the N.E. coast of Bornholm, we have a sand sample that was sent us by Gerhard Koppen, Skanegaten 3, Nybro, Sweden, who personally collected it on one of his trips. The sample is a fine grained, gray sand, consisting chiefly of quartz (chiefly colorless, but smoky, brownish also present), also some greenish epidote, reddish feldspar, pinkish garnet, and lustrous black magnetite.

Beach sand from Ravenscraig, Scotland

Ravenscraig is a little town on the Firth of Forth in southeastern Scotland. From the beach in the little town we have a sand sample that was collected for us by Sandy Ramsay, 1015 Aikenhead Rd., Kings Park, Glasgow S4, Scotland. The sample is a fine grained, reddish-brown sand, consisting chiefly of quartz (brownish, colorless, smoky, gray chalcedony), black magnetite, white sea shells, also black coal.

"Beach sand from Ravenscraig, Pathhead sands, Kirkcaldy, Fifeshire, Scotland.

"Ravenscraig Castle (here) is the Ravensheuch of Sir Walter Scott's poem, 'Lovely Rosabelle'.

"Kirkcaldy is the 'Langtoon' (Longtown) of Andrew Fairservice in Sir Walter Scott's novel, 'Rob Roy'.

"There should be lots of sea coal in the sand.

"This sand is from my home town, Ravenscraig. Sir Walter Scott mentions this castle in his poem 'Lovely Rosabelle'—he called it Ravensheuch Castle in the poem and oh yes, while I remember, this is the spot where John Buchan opens his story 'Prester John', where Laputa goes into the cave on the shore.

"Buchan's father was a minister in Kirkcaldy, and Buchan attended the high school there. The Latin teacher used to delight in telling me, who was always at the bottom of the class, that John Buchan was a wonderful classical scholar."—on label.

FLUORESCENT MINERAL REPORT

Editor & R&M:

Would you please publish the contents of this letter in your next issue of "Rocks & Minerals"?

The purpose of this article is to request all Fluorescent Mineral collectors to pool their knowledge so that a complete "Fluorescent Minerals Report" may be compiled.

For one reason or another, the greatest majority of the information on sources is not easily available to all collectors. Much information has either not received widespread publicity or has never been published. For years I have been collecting odd bits and scraps of information on Fluorescent minerals, much of which I found in the form of short bulletins and lists. I feel that there is a great need for a complete single volume publication entirely devoted to fluorescent minerals. Would you like to have all this information at your fingertips? Over 200 minerals fluoresce.

The "Fluorescent Minerals Report" I am compiling, will be completed and published on or about July 1, 1960. This publication will include the following information.

- I. Name of Mineral.
- II. Location of the find.
 - a. Name of Quarry, mine, etc.
 - b. Nearest town or city to location.
 - c. County, state & country.
- III. Color of response to long and short wave ultra violet radiation.
- IV. Sources of specimens from these locations - for those who would like specimens from a specific locality without having to visit it.
- V. Quality of specimens and brilliance of color of response.

This publication will owe its success to each and every person, collector and dealer alike who provide me with first hand information and specimens with which an evaluation can be made.

Each of us should at some time in our lives make some contribution to his fellow men so that all may benefit and enjoy more of the many pleasures of mineralogy as a hobby. This work is my contribution.

Wm. C. Weigelt
61 Broadway
Frostburg, Md.

Wants to trade rocks!

I would like to trade specimens of rocks and minerals with anyone who is interested. I have specimens from all over the U.S.

Charles Doyon
27 School St.
Lisbon Falls, N. H.

THE AMATEUR LAPIDARY

Conducted by Major George W. Owens, U.S.A.F. (Res.)

Queries and correspondence should be mailed to R&M Attn: The Amateur Lapidary

RESEARCH ON AN OLD STORY

OR

ANNE OF GEIERSTEIN'S MYSTERIOUS OPAL

How many of us moderns of today have ever heard of Sir Walter Scott's Waverly Novels? How many of us have ever had the pleasure of reading them? With the exception of certain works still "Standard" in our schools, few of us have even heard of these novels, yet from the tale of "Anne of Geierstein" the Opal has been credited with powers supernatural. Bad luck token, gem of dark forces with its unexplained glow of fantastic colors—surely such a gem must have all the powers with which the famous author has credited it. How many times have jewelers lost customer and sale when a beautiful Opal was offered?

A case not too long ago is still fresh in our memory—when showing our collection to a very highly educated family consisting of Mother, married daughter, and husband; on presenting the daughter with an outstanding Opal cabochon it was literally "snatched" away from her hands by the mother with the remark—"She is 'encente' and I would not want anything to happen."

Having seen such exhibitions as this, heard the bad luck story, and having been guilty of repeating this reputed "ill-luck" tale, it was only natural that when a complete set in one volume with notes and commentary by the author came our way that we should read it. Incidentally, the story is well worth reading, even today. Sir Walter was a master craftsman with his pen and achieves a masterful story!

On reading this famous tale, much to my surprise, I discovered that modern writers have assigned, strengthened and built up the story of the evil powers of

the famous Opal in it. Actually this Opal *did not* belong to Anne, she was a very "lucky" girl and in the novel the Opal is never credited with any mysterious powers of "bad-luck" forces.

For a complete understanding of this fact one must read what Sir Walter wrote in 1831, "Anne of Geierstein" or the "Maiden of the Mist." Waverly Novels—by Sir Walter Scott.

Here is an abbreviated account of the happenings so often referred to in laying strange powers to the credit of a most beautiful gem—the Opal.

About 1474 a father and son, travellers, became lost in a storm late in the day above Lake Lucerne in the Swiss Alps. The son was rescued from a precipice by a maiden who appeared unexpectedly and guided him to her uncle's castle where he found his father by the fire recovering from his ordeal. Later the son was warned that Anne, the girl that had saved him, was the granddaughter of a Persian Shaman. Her name was Hermoine and her father, Dannischemand, a Persian magician, before his disappearance, "had constructed a silver lamp of the most beautiful proportions which he placed on a pedestal some six feet high representing a truncated column of marble having its base sculptured with mysterious hieroglyphics. With what essences he fed this flame was unknown to all, except perhaps to the Baron, at once his master and his pupil, but the flame was more steady, pure and lustrous than any which was ever seen, excepting the sun of heaven itself and it was generally believed by the servants and country folk that the magician made it an ob-

ject of worship in the absence of that blessed luminary." Before he departed Dannischemend promised "I will bequeath the task of perfecting your studies to my daughter who will come hither on purpose. By the first beam of sunshine she will be with you. Be kind to her but not over kind. If you value the permanence of your family look not upon her as aught else than a help-mate in your studies!"

All night the Baron waited in solitude, then at sunrise went with his page to his laboratory. As they entered "the page followed close behind his master and was astonished to the point of extreme terror at what he beheld although the sight, however extraordinary, had nothing in it save what was agreeable and lovely. The silver lamp was extinguished and removed from its pedestal where stood in place of it a most beautiful female figure in the Persian costume in which the color of pink predominated. But she wore no turban or head dress of any kind save a blue riband drawn through her auburn hair and secured by a gold clasp, the outer side of which was ornamented by a superb *OPAL* which, amid the changing lights peculiar to that gem, displayed internally a slight tinge of red, like a spark of fire. The figure of this young person was rather under the middle size but perfectly well formed; the Eastern dress, with the wide trousers gathered round the ankles made visible the smallest and most beautiful feet which had ever been seen, while hands and arms of the most perfect symmetry were partly seen from under the folds of the robe, while the little lady's countenance was of a lively and most expressive character in which spirit and wit seemed to predominate."

So this then was Hermoine, the owner of that wonderous, mysterious Opal, exactly as described by Sir Walter Scott over a century ago! "In the dances she was so unrivalled in lightness and agility that her performance seemed that of an aerial being. Whispers averred that while she played with her young companions, at hide and seek, in the labyrinth and

mazes of the castle gardens she became animated with the same supernatural alertness. Hedges or treillage were surmounted by her in a manner which the most vigilant eye could not detect; for being observed on the other side of the barrier at one instant, in another she was close beside the spectator." However, in a short time this beautiful creature was to die, and the Opal to disappear with her—to never be recovered. Of the Opal, Sir Walter, the author of Waverly says: "When her eyes sparkled, her cheeks reddened, and her whole frame became animated, it was pretended that the Opal clasp amid her tresses, the ornament which she never laid aside, shot forth the little spark, or tongue of flame, which it always displayed, with an increased vivacity. In the same manner, if in the half darkened hall the conversation of Hermoine became unusually animated, it was believed that the jewel became brilliant, and even displayed a twinkling and flashing gleam which seemed to be emitted by the gem itself, and not produced in the usual manner, by the reflection of some external light. Her maidens were also heard to surmise, that, when their mistress was agitated by any hasty or brief resentment (the only weakness of temper which she was sometimes observed to display), they could observe dark red sparks flash from the mystic brooch, as if it sympathised with the wearer's emotions. The women who attended on her toilet further reported that this gem was never removed but for a few minutes, when her hair was combed out; that she was unusually pensive and silent during the time it was laid aside, and particularly apprehensive when any liquid was brought near it."

So later the Baron and Hermoine became engaged and married. Within a year, Sybella, a daughter was born to them. Now Sybella is to become the mother of Anne of Geierstein after certain events take place. At Sybella's christening an old dowager remarks that Hermoine is a demon who dares not cross her brow with Holy water. Hermoine's husband, the Baron, becomes very angry and

is determined to prove this a lie. He is repeatedly warned "Be not rash." "Try no experiment! There is something mysterious about that OPAL talisman; be prudent and let the matter pass by."

However, the Baron, whose rage grows with each passing moment and whose madness overcomes the wisdom to which he has made pretence—allows the public statement of the old lady to get him to the point where he answers the warning briefly: "Are you, too, such a fool?"

At this instant Hermoine, now the Baroness of Arnheim, enters, she looks pale from her recent confinement which makes her all the more attractive and interesting even if less animated than usual. She makes her compliments to the company with grace and attention and has just started to inquire into the reason for the old dowager departing when the Baron starts the procession to the Chapel, bringing up the rear with the Baroness on his arm. The Chapel is almost full of distinguished company and each is watching the proceedings with keen interest. The young infant, Sybella, is brought forward by four young ladies who support the infant on a litter. As they pass the threshold into the Chapel, the Baron dips his finger into the font stone, and offers holy water to his lady, who accepts it as usual, by touching his finger to her own. But then, as if to refute the old dowager's tale, and with a bit of horse play entirely out of place for such an occasion, the Baron flips a drop or two of the moisture onto the beautiful head and features of Hermoine. The Opal, on which a drop has fallen, shoots out a brilliant spark not unlike a falling star, and becomes a lightless colorless thing. At the same time, Hermoine sinks to the floor with a deep sigh of pain.

Most of the guests depart and medical aid arrives. On opening the door to the room where the Baroness had been carried no trace of her can be found. The only "remains" discovered are a hand full of grey ash found on the bed where she had been placed. That is also the end of the Opal in the story as it is

never mentioned again.

The two travellers continue their journey and Anne of Geierstein accompanies them.

It is to be noted that not once at any point in the story does Sir Walter Scott attribute any evil power or uncommon force to the Opal, nor does he in any way make it out to be anything except a talisman of good luck.

From this brief synopsis it may be seen that the Opal was not Anne's, but belonged to her Grandmother, who died when Anne's mother was less than a week old. The Opal disappeared with its owner Hermoine, whose death is not actually depicted but assumed. It never enters the tale again. From this we may also assume that Anne never saw it. In all probability she never knew it had existed. To quickly finish the story, Anne led a happy life as a child and as the wife of a brave young knight in her castle of Geierstein. Considering those times no one can say that Anne was other than lucky!

As to the Opal—Sir Walter Scott classed it as a thing of great beauty which was the joy of the wearer. Not even by any remote inference does he attribute any special powers to it.

So there you have it. And all the modern writers who have either "put words" in old Sir Walter's mouth or have simply mentioned the story as the cause of Opals "Bad-luck" could well look to their laurels and do a bit of cross checking before repeating a tale that has no basis in fact! Even we have been guilty of this in the past, but never again!

Opal is a lovely, beautiful gem in its own right and most certainly is appreciated wherever students of gemology gather, or for that matter, by everyone that loves and feels appreciation for gems of beauty. A flashing, vivid, multi-coloured Opal is a joy to behold and the only "Bad-luck" we know is the bad luck of those not fortunate enough to own one!

For treatment in cutting and polishing Opal please see issue Sept.-Oct. 1956,

pp. 491-493, of ROCKS AND MINERALS. Back copies are available. For those inclined to cutting Opal—many dealers have their advertisements in ROCKS AND MINERALS each issue. Any one of them is more than willing to attempt to please you. Please remember that Opal, like pretty women, comes in a multitude of shapes, colours and styles. The piece needed to cut that perfect cabochon may

be hard to find but keep trying because one quality Opal in any collection is a very large asset. And do not be bothered by "Old wives tales." When even such a lovely story as Anne Geierstein can be misunderstood there is no question but that we still have those with us who firmly believe in supernatural attributes of Opal—but so what? Isn't it a lovely gem?

WERE HIDDEN AND MACKINTOSH MEMBERS OF N. Y. CLUB?

Editor R&M:—

The New York Mineralogical Club recently published as you know a list of former members who had minerals named after them. The names of William Earl Hidden and James Buckton Mackintosh were not included as I believe they should have been.

Dr. George F. Kunz wrote Mr. Hidden's obituary for the club and it is listed in the obituary files in the Science Dept. of the New York Public Library. Hiddenite was named in his honor.

Regarding James Buckton Mackintosh, who died April 15, 1891 and whose obituary was written by Professor Thomas Egleston for the School of Mines Quarterly (No. 3, vol XII) and also for the Journal of the American Chemical Society (vol. XIII - No. 5), I have no positive evidence that he was a member of the club; but it would seem reasonable to assume that he was for he had been on very friendly terms with his future brother-in-law Dr. Kunz since 1873. They both lived in Hoboken, N. J., only two blocks apart at the time of Mackintosh's death, (Mackintosh lived near 11th on Bloomfield St., House No. 1107 while Dr. Kunz lived near 10th on Garden St., House No. 1004). Mackintosh refined thorium oxide from monazite sand for the lighting industry in his Hoboken laboratory and was also chief chemist for the Consolidated Gas Co. in New York City.

Concerning Mr. Niven's claim of having discovered the uranium-thorium minerals nivenite, yttrialite and thorogummite a few facts may be of interest. Mr. Hidden, who usually did all the field work for Hidden & Mackintosh, had learned about the deposit of rare earths at the Barringer property in Llano County, Texas. Unfortunately at the time he was under an agreement with Mr. Thomas A. Edison to search for chromite deposits in nearby states and was, therefore, not free to go to Texas at that time. He decided to hire Mr. Niven for \$300-\$400 to make the trip and to send

a box of specimens to my father for chemical analysis. This was done and a few months later Mr. Hidden made the trip to Texas himself and collected more specimens. My father alone made all the chemical analysis and identifications. Altho he did not approve the idea of naming minerals after individuals they decided to reward Mr. Niven by naming a mineral after him; but to put it mildly I do not think it was proper for Mr. Nivens to have expanded his claim for credit after my father's death as his analysis alone determined which of the many minerals sent him were new. Later Mr. Hidden and Dr. Hillebrand, Chief Chemist of the U. S. Bureau of Standards, named Mackintoshite in his honor.

James H. Mackintosh
934 Paulding St.
Peekskill, N. Y.

Editor's Note—In the May 1947 R&M appeared "Abstracts of the First 20 Meetings of the New York Mineralogical Club", by E. Lawrence Sampter, pp. 426-428. In these abstracts, Hidden is mentioned 4 times as exhibiting minerals at the following meetings:

Dec. 28, 1886 (4th Meeting)—Mr. Hidden exhibited a 12 lb. meteorite from North Carolina and also hiddenite.

Feb. 1, 1887—Hidden exhibited emeralds from North Carolina.

6th Meeting (no date)—Hidden exhibited rutile from North Carolina, meteorites and quartz from N. Y. C.

March 29, 1887 (7th Meeting)—Hidden exhibited meteorites from India and England, hanksite from Nevada and xenotime from North Carolina.

You would assume, therefore, that Hidden was a member of the Club, unfortunately, Mackintosh is not mentioned anywhere but he too could have been a member.



Fossil Department

Short items on fossils and their localities are wanted.

Please send them to the

Fossil Department (Rocks and Minerals), Box 29, Peekskill, N. Y.

ILLINOIS—"I found a large boulder deposit last fall (1959) as I was collecting crinoid fossil plates from the glacial deposit south of Shelbyville, Ill., and upon noting sections of massive calcite on the surface of the boulder I investigated and found the whole boulder made up of fossil plants. I then engaged a man with a bulldozer to get the material out, after of course making satisfactory arrangements with the landowner and had the material brought to my home. The location of this boulder was 3 miles south and west of Shelbyville, Shelby Co., Ill.

"To my knowledge there is no more of the material in the area and it probably can be considered an erratic occurrence of hot spring action."—a recent letter from Noble Price (Price's Gun House, Pana, Ill.).

Three specimens were received from Mr. Price, all being chocolate-brown fossilized limestone, with veins and small rounded areas of fl. whitish calcite (one had platy, amber-yellow calcite). The finest fossils were in a 2x4 specimen which showed 3 inch long twigs.

See Illinois, under World News, in this issue for more information on this occurrence.

KENTUCKY—"Just before the approach upward on Highway 31-W through the cut in Muldraugh Hill, going south, and on the east side of the road also, one can find fossil limestone, containing crinoids. This spot is right along the road and at ground level at the reservation (Fort Knox, Hardin Co., Ky.)"—note from Sfc. William J. Malarky, 962-D Kennedy Courts, Fort Dix, N. J., who was stationed not long ago at Fort Knox.

MINNESOTA — From Blaine Conley, Swan River (Itasca Co.), Minn., we have the following item, dated March 2, 1960:—"I have 'winged brachiopods' from the gravel deposits here, also one turritella snail from a local quarry. Also sunflower coral, plus a dozen more fossils as yet without a name."

MISSISSIPPI — From Miss Carol Schlegel, 4407 Forest Park Drive, Jackson 6, Miss., we have the following note, which arrived a few weeks ago.

"I have collected fossils at a place northeast of the city limits. It is in a public park on a nature trail. The fossils are located in a gorge named Fossil Gorge. There I have found such things as turritella exoleta (turret shell), scaphopod dentalium semistriolatum (tusk shell), and a few blastoids. I am enclosing some samples of these."

A number of loose fossils were received, and though small they were all of good quality and all grayish-white in color. Jackson is in eastern Hinds County of western Mississippi.

NEW HAMPSHIRE — From White Mountain Mineral Shop, Campton, N. H., we have an interesting fossil specimen—crinoids and sea shells (indistinct) in gray flint.

"Fossils in flint from West Campton (Grafton Co.), N. H."—on label.

SOUTH CAROLINA — From Dr. Waldo H. Jones, Box 375, Myrtle Beach, S.C., we have a large but beautiful 5" x 8" petrified coral, grayish-white in color.

"Pleistocene coral. Note the partial solution of the coral rock over the ages. This is a very unusual form of coral. When dug out it was completely em-

bedded in a blue oceanic mud. Found 21 ft. below the surface (near Myrtle Beach, Horry Co., S.C.)."—on label.

SOUTH DAKOTA — From Mrs. Ed Olson, Beresford, S.D., we have a beautiful ammonite, 2 x 2½ inches in size, dark gray in color, with a brownish (slightly greenish) pearly, opalescent, surface.

"Ammonite. From Eagle Butte (Dewey Co.), S.D."—on label.

WEST VIRGINIA — "Brachiopods occur in shale in road cut (W. Va. 9) between Hedgesville and Back Creek in Berkeley Co., W. Va."—item sent in by Robert P. Duke, Hedgesville, W. Va.

BELGIAN CONGO — An anonymous reader has sent in a clipping (dated Aug. 1959) but unfortunately the name of the paper was not given. The clipping was titled "Fossils trace man back 600,000 years in gorge in Africa." Part of clipping reads:

"Human fossils about 600,000 years old—possibly the earliest known trace of man—have been found in Tanganyika (East Africa).

Dr. Louis S. B. Leakey, a prominent anthropologist, said that his wife, also an anthropologist, had found the fossils among animal remains in the Oldway Gorge in Tanganyika, July 17, 1959.

Dr. Leakey, 56 years old, a British

expert of East African anthropology, has searched for many years to prove his belief that man originated in Africa. He is curator of the Corydon Museum of Natural History in Nairobi, Kenya, Africa.

Crude tools were found with the fossils, suggesting some form of human culture, Dr. Leakey said. He said a reconstruction of the bones showed a skull that was estimated to date from the second half of the Pleistocene geological era 600,000 years ago.

The Peking man, one of the most famous prehistoric relics, was estimated to have lived 500,000 years ago.

CANADA — The complete fossil of a chasmosaurus, a dinosaur that roamed southern Canada 60 million years ago, was unearthed 2 years ago (1958) 10 miles south of Irvine, Alberta, Canada, and sent to the National Museum at Ottawa, the capital of Canada.

WALES — "Abundant lamellibranchs may be found on Pebble Beach, Barry, Wales. Barry is situated 10 miles southwest of Cardiff, capital of Wales. The lamellibranchs are gryphae plagiostoma lima of the Lower Lias, a limestone of the Lower Jurassic system."—item sent in by Alan Morgan, 30 Porthkerry Rd., Barry, Glam. South Wales.

OBITUARY NOTICE

MILFORD WALL

Mr. Milford Wall of Boston, Mass. died Friday morning May 6, 1960, of heart failure. He was only 62 years of age. Mr. Wall was well known and well liked by a great number of mineral collectors in New England, especially so by the members of the Boston Mineral Club of which he was a past president. His extensive collection was by far one of the very best in New England, and most of the specimens were of museum quality. Besides studying mineralogy, geology and biology he was an expert photographer and good lecturer. He leaves Mrs. Ora Wall and a married sister in Cleveland, Ohio.

Gunnar Bjareby

Ruth Wentworth on sick list!

Editor R&M:

Please excuse delay in sending our renewal as my wife, Ruth H. Wentworth, suffered a shock Aug. 24, 1959 and was confined to the hospital until April 1, 1960. She is home at present but is unable to get around except with help. The doctor tells us it will be a long time before she will be able to walk again. We all hope that the warm weather will help her and that she will be able to get around once more. I know that she would appreciate a word from her many friends to help her pass the long days before her.

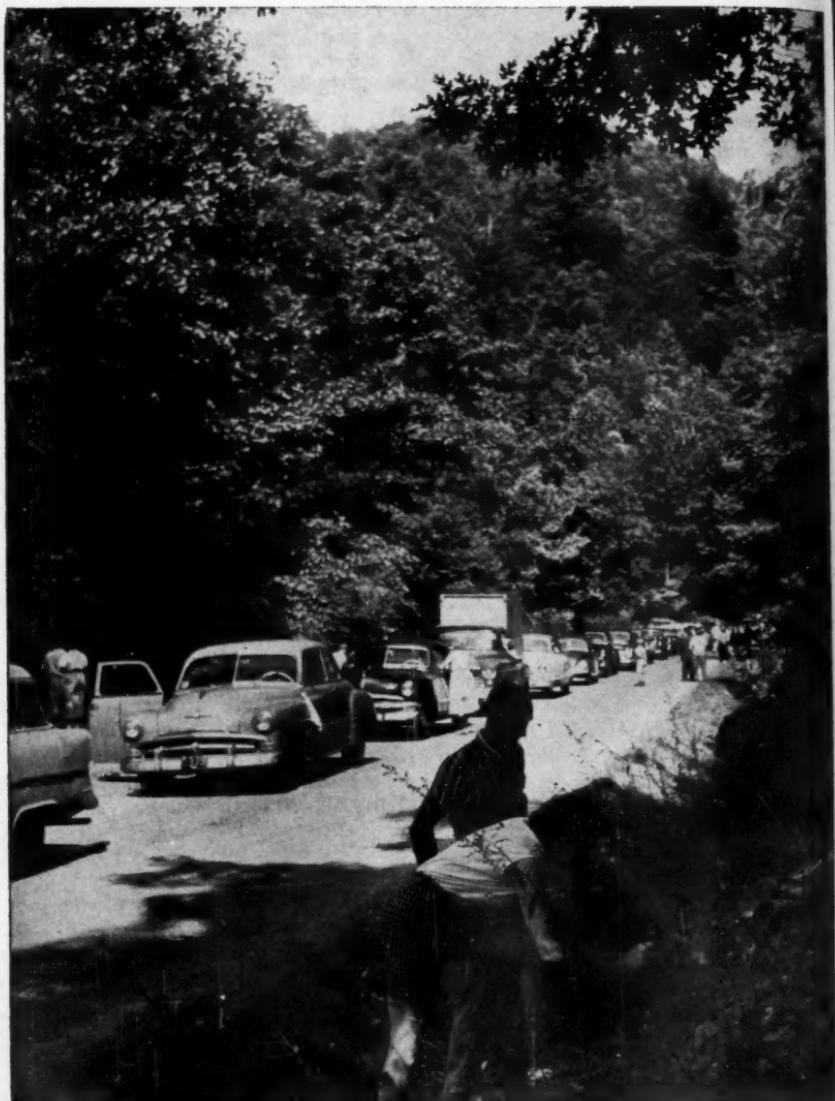
Ralph M. Wentworth

135 Maine Ave.

Portland, Maine

May 10, 1960

Editor's Note: we do hope some of her many friends will write to Mrs. Wentworth.



ROCKHOUNDING EN MASSE

This photograph, taken on one of the field trips following the 1958 Eastern Federation Show in Asheville, N. C., shows a portion of the large number of cars on the trips. This scene will be re-enacted several times again this year following the 10th annual Eastern Show in Asheville, August 4, 5, 6, 1960.

EASTERN FEDERATION CONVENTION ASHEVILLE, N. C.

Aug. 4 - 6, 1960

Plans are rapidly shaping up for an outstanding show and convention of the Eastern Federation of Gem and Mineralogical Societies in Asheville, N. C., August 4, 5, 6, 1960, according to Robert R. Williams, Jr., General Chairman.

For the first time in the Federation's history, the group is returning to a city previously host. The Southern Appalachian Mineral Society was host to the Eastern Federation in Asheville in 1958, an event highlighted with a special North Carolina issue of ROCKS AND MINERALS.

Reservations for competitive exhibits have been received from individuals and mineral societies from all Eastern states from Canada to the Canal Zone. Practically all commercial dealer space has been reserved by a widely diversified group of well-known dealers.

Outstanding North Carolina specimens again will be on special display. The famed collection of the late Burnham S. Colburn, which was given to the Southern Appalachian Mineral Society, will be on public display for the first time.

Other special exhibits are being arranged from these foreign countries through their respective embassies: Ecuador, British Guiana,

Union of South Africa, Canada, Mexico, Argentina, Brazil and Peru.

Organized field trips to excellent North Carolina collecting areas will again follow the show and convention for four days. The second annual Spruce Pine Gem and Mineral Festival then will take place on August 10, 11 and 12, followed by more field trips in that rich mineral area. On some of the 1958 field trips, more than 500 cars were on the caravans attesting to the great interest on the part of visiting rockhounds. Field trip locations this year at both shows will be different than those visited in 1958.

The Housing chairman of this year's Asheville show reports that a large number of hotel and motel reservations already have come in and suggests that those planning to attend should make arrangements as soon as possible. At the 1958 Show, every available room in the Asheville area was taken during Show week. Excellent camping facilities will be provided again this year for those wishing to camp in the beautiful mountains of Western North Carolina.

Full information about the show may be obtained by writing post office box 1617, Asheville, N. C.

NIGHT FELL AND THE FUN BEGAN!

The latest field trip of the Mineralogical Society of Southern California took 62 members and friends to the Perlite Quarry area in the Bristol Mountains. The destination of the group, headed by "Cap" Taylor, was about 15 miles north-east of Ludlow, Calif. While many excellent specimens of perlite were found during the daylight hours, when night fell, the fun began!

Representatives of Ultra-Violet Products, Inc., of San Gabriel, Calif., accompanying the party, explained the phenomenon of black light. Then, separating into 12 groups, each was furnished with a Mineralight Lamp and started out in search of fluorescent minerals. It was an entirely new experience for most of the party and excitement ran high as fluorescent Chalcedony "roses" in jasper were found and became prized possessions.

As one member of the party so aptly stated, "It's like visiting a new world! Like a trip to the moon!" Many are already looking forward to another visit to a land of fluorescent beauty and color, discovering another "New" world.

Yogo Gulch, Mont., closed to collecting! Editor R&M:

I thought you should know that Yogo Gulch (Fergus Co.), Mont., famous for its sapphires is closed to all collecting. It seems they are working the dumps for sapphires. Anyone caught collecting and have sapphires in their possession will be fined \$100.

A guard is there to enforce this rule.

Dick Le Maire
Sunset Lane
Rye, N. Y.

March 1, 1960.

A NEW CRYSTAL ADDED!

Editor R&M:

I would like to tell you about a new crystal occurrence in Trenton, N. J.

She was born on May 9, 1960, to John & Lillian Swift of 955 Beatty St., Trenton 10, N. J., and—yup! You guessed it! Her name is "Crystal" Lynn and I'll bet she will be a "Pebble Pup" before she can walk.

I guess you might say we just added another crystal to our collection and she is just as pretty as any crystal I've ever seen!

John Swift
Trenton, N. J.

May 14, 1960



WOMEN'S CORNER OF R & M

Conducted by Winnie Bourne

c/o Rocks and Minerals

Box 29, Peekskill, N. Y.

Always interested in Women's Corner of R&M

Dear Winnie:

I am always interested in your "how-I-got-to-be-a-Rockhound" letters from ladies, and think somebody might be interested in mine—which must surely be about the most roundabout way anybody ever got to be one.

I was taking a dim view of my living room, one nasty January day, and in such mood I usually go to the Library and get out the latest bound volumes of *HOUSE & GARDEN* or *HOUSE BEAUTIFUL*, etc., to see what I can do. Well, in one of these, I found that first pebble-mosaic article, which was later so expanded as to constitute a whole new field of interior decoration, via pebbles, rocks, glass, tile and even buttons and bones.

That spring, we took our first rock trip—a tame 200 miles up a sedimentary coast, looking for "pretty stones." How did we come to get inland and pick up that bit of Devonian chain coral? Why ever did we lug home that half-ton slab of quite uninteresting limestone—and go back a month later for the other half (we found it, too!) Can only think it must be in the blood, perhaps we had geological ancestry. Next thing I knew, we were plucking bits of arborescent copper off the dumps of Keweenaw Peninsula and we were—nearly a thousand miles from home!

Sometimes I thought we were a little crazy. What was my nose doing in that cold beach gravel at Beaver Bay? and how came I after thomsonite at Tom Lake (which I didn't find, but some very nice jasper), where the mosquitoes were as big as dragon flies, and came with diamond drills? I would look up and find myself sitting on a stub of asphalt, click-

ing at a choir of grey squirrels, and I met a bear, once, paddling barefoot down the main street of Copper Harbor.

Well—that's the way it's been for us two middle-aged ladies with bits (of rock) in our teeth.

The living room, alas, remains the same—except that on the mantelpiece is that very fine cast of a dinosaur footprint and some slab tiger-eye and a couple of Petosky stones. On one of the TV trays I haven't pushed out to the collection outdoors, as yet, are the current, choice, of our last, Canadian, trip. A jar of Lake Superior agate and a plate of uranium ore chips, (courtesy of our friends), decorate a desk top. The thomsonite, still in matrix, as I do not know how to get it out, lives over with the LP records, and in various corners and cul de sacs, I am sure there are the chert and chalcedony bits that my Siamese cats like to push around because they rattle.

The fact is, I don't see the living room anymore. I see the puddingstone boulder at Bruce Mines, in Canada; the spike moss and the trillium above Green Bay; the pair of spruce trees outside our cabin window on the creek bank at Findlay, Minn.; and the first agate I ever found, at Paradise Beach.

I smell the breakfast bacon and eggs on the campfire, and the pine cone mast, and the cold wet sand of Lake Michigan, and the dry, sunny, dusty aroma of a really fascinating gravel pit. And remember the absolutely charming retired streetcar conductor, who showed us over his rock-garden in Duluth, tastefully composed (so he thought) of igneous, metamorphic, sedimentary and curbstone cement, all cheek by jowl in the most dizzy-

ing fashion. Also the perfectly hair-raising female grocery-keeper who, I am sure, could rope and tie any six cowboys, but she seemed to like us and gave us permission to collect lycopodia all over her forty acres.

The back of the davenport is overhung with maps of northern U.S., Ontario and Quebec, together with diagrams of Tilly Foster, Bumpus and Ruggles (purely historical interest, I realize) and on the floor is my file of R&M, five volumes of the Federal Guides, - and I have just discovered there are zeolites around the Bay of Fundy!

VTY

Mrs. J. F. Martin
553 Sheffer Rd.
Aurora, Ill.

A Windy Gal from a Windy State!

Dear Winnie:

Have intended for sometime to write. A windy gal from a windy state, that's me. Kansas doesn't have too much in the way of materials but we make up in

enthusiasm. I am one gal that isn't contented till she whittles on all suitable stones and gets them down to small size, shaped up and polished. I like minerals too but don't have a chance to collect here and no place to display the ones I have. Might as well admit, I'm ignorant about them even tho I have tried to learn a bit.

Last October we started the "Lady Laps" which is a group of women in our club (Wichita Gem & Mineral Society) that meets one afternoon a month for the purpose of learning more about the lapidary art and aiding each other in the art.

Want to say that thru "Rocks and Minerals" my husband and I have met 5 fine people and I correspond with 3 more. That does not include Mr. Zodac whom we now count as a friend. Anytime any of you are out this way stop and see us or drop me a line.

Lela Hile
238 S. Richmond
Wichita 13, Kansas

VISITING ROCKHOUNDS WELCOME (Cont. from Page 327)

Richard C. Johndy, Cascade Road, Lake Placid, N. Y.
Egbert McElroy, RFD 1, Box 3, Monroe, N. Y.

Thomas W. Carroll (age 16), 101 N. Chestnut St., Mount Olive, N. C.

Herby Bolik, 26 Wilson Drive, Morganton, N. C.

Melvin E. Wagner, E. Main St., New Freedom, Pa.

Ronald N. Cibik, 427—3rd St., Leechburg, Pa.

Mr. & Mrs. A. B. Carson, 12 Cateechee Ave., Greenville, S. C.

Rev. Theo. H. Judt, 520 N. Washington Ave., Scotland, S. D.

V. Sabin, 723 Steves, San Antonio, Texas.

Dr. & Mrs. H. R. Thomas, Keith Lane & Cedar Springs Dr., Athens, Tenn.

Larry Volkert, 54 N. Pleasant St., Middlebury, Vt.

Nelson R. Longe, 5 Leonard Ave., Springfield, Vt.

Rudy J. Bland, Jr., 3218 Rueger St., Richmond, Va.

Wm. Carter, 1524 Wellesley St., Roanoke, Va.

William Johnson, Parker's Trailer Court, Leesburg, Va.

Mrs. J. Carl Rinehart, Pennsboro, W. Va.

G. W. Weber, 1320 Portland Ave., Walla Walla, Wash.

Lyle De Rusha, RR 1 Chippewa Falls, Wisc.

Thomas L. Sellers, Box 186, Margarita, Canal Zone

Mr. & Mrs. W. F. Erichsen, 2075 Lansdowne Rd., Victoria, B.C., Canada.

Douglas Scott, Markham, Ont., Canada.

Ret R. Latta, 1009 Oakmont, RR 7, Rockford, Ill.

John O'Callaghan (age 13), 303 Wisner Ave., Park Ridge, Ill.

Malcolm Arnett, Fremar Art Studio, Corydon, Ky.

Randolph E. Caney, 3rd 21 Lancaster Ave. West Springfield, Mass.

Joseph Skaritz, Hwy 35, Box 36, Seneca Mobile Manor, Clinton, N. Y.

Bobby Parker, Evergreen Ave., Rye, N. Y.

Dick Le Maire, Sunset Lane, Rye, N. Y.

Woody Struthers, 132 Grandview Ave., Rye, N. Y.

Mrs. Pearl B. Still, Due West, S. C.

Mrs. W. L. (Iris) Harrison, Rt. 1, Box 165, Groveton, Texas

CURRENT EVENTS

of the

EASTERN FEDERATION OF MINERALOGICAL AND LAPIDARY SOCIETIES

PRESIDENT

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Upper Montclair, N. J.

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Box 236

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3418 Flannery Lane

Baltimore 7, Md.

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Roy E. Clark

Box 607

Newport News, Va.

SHOW TIME IS HERE

Rock enthusiasts are now heading for Asheville, North Carolina, for the Tenth Anniversary Convention and Show of the Eastern Federation, which opens at 2 P.M. on Thursday, August 4th, closing at 10:30 P.M. on Saturday, August 6. Convention headquarters are at the George Vanderbilt Hotel. A hearty welcome awaits all comers by the host, the Southern Appalachian Mineral Society.

Business meetings, interesting discussion groups and lectures are planned for these 3 days. The program will include such subjects as preparation of mineral specimens, techniques of micromounting, lapidary secrets, gem and mineral identification, use of refractory liquids, etc.

Three days of guided field trips follow the show on August 7, 8 and 9th, packed with stops at the best olivene, feldspar, chlorite and rare earth deposits of Western North Carolina, which afford over 300 minerals and 15 gemstones. The Joy Wagon will be along to bring sandwiches and drinks right to your "diggins".

The Special Events Committee has planned a fabulous array to add to the glamour of the show. There will be many competitive exhibits, and junior collectors will also compete for prizes. About forty dealers booths have been reserved.

For those who like to trade and swap, the Swap Shop will operate almost around the clock. Bring your best specimens for trading. Don't miss this . . . the treat of your lifetime.

If all this isn't enough, there's the Spruce Pine Gem Festival only a short distance from Asheville, which opens on August 10, ending with the 13th, and it is reported all mines in the Spruce Pine district will be open during these days.

So come along to Asheville, make it a vacation trip and stay as long as you wish.

New Member Societies

The Federation welcomes the following societies:

Miami Mineralogical and Lapidary Guild

Pres. Lynn H. Collar, 470 N. E. 52nd Terrace, Miami, Florida

Secy. Mrs. Jean Blanks, 1235 N. W. 30th Street, Miami, Florida

The Jacksonville Gem and Mineral Society
Pres. H. C. Bickner, 2767 Lydia Street,

Jacksonville, Florida

Secy. Mrs. Nellie W. Rowlands, 5001 Phillips Highway, Jacksonville, Fla.

Northern Berkshire Mineral Club

Pres. Emery A. St. Cyr, 45 Porter Street, North Adams, Mass.

Secy. Mrs. Alice Stevens, 671 Curran Highway, North Adams, Mass.

Second Edition - Program Material

The Second Edition (1959-1960) of Program Material Available, to be attached to the 1957-1958 edition, has been issued by our Federation's Educational and Program Aids Chairman, Mrs. Marguerite R. Collyer. Much work has gone into the compilation of this 4 page report, which includes Federation programs available, programs from outside sources, bulletins, speakers, and list of Bureau of Mines films. No club meeting should ever be dull, with this federation service to aid your program chairman.

What Goes With Our Clubs

The Gem and Mineral Society of the Virginia Peninsula, of Hampton, held its first field trip of the season on April 30-May 1, a two-day event, inviting members of the Richmond, Norfolk and Lynchburg societies as guests. It was declared a great success. On Saturday they visited a location near the Fairy Stone State Park, where plenty of specimens of staurolite or "fairy" stones were found. On Sunday at an area near Newcastle in the Blue Ridge Mountains Septarian Nodules were found in sizes from walnut-size to several hundred pound giants.

A 20-minute color film was shown on Asbestos followed by a discussion of the mem-



Mrs. B. H. Johnson with two Septarian Nodules in shale bank at a location near Newcastle, Va.

bers who had been advised to read up on this mineral prior to the meeting in April. In May a series of colored slides prepared by the Eastern Federation on Micro-Crystals were shown, followed by 3 five-minute talks; speakers being Mac Israel on Tumbling, Francis Murray on An Automatic Cabochon Machine and Carl Wikstrom on Faceting.

The Pebble Pups, junior club, recently saw colored slides and had a talk by Mac Israel on Tumbling Stones, demonstrated with a small tumbler.

The Western South Carolina Gem and Mineral Society, of Greenville, reports the Rock Swap and Gabfest in March a lot of fun for everybody. A Rockhound Tour was held in lieu of a field trip, viewing Indian Artifacts at the home of M. R. Thackston, Facted Stones, Cabochons, etc. at the home of J. A. Johnson and Mineral and Lapidary display at the home of T/Sgt. and Mrs. George Bradley. At the May meeting Barite and Associated Minerals of the King's Creek Area was subject of a talk by Harold Hand, followed by a brief discussion of other forms of Barite by Mrs. A. B. Carson. Field trip a week later was held to the Barite Mine at King's Creek.

The Gem City Rock and Mineral Association, of Erie, Pennsylvania, planned the first Rock and Mineral Show ever held in Northwestern Pennsylvania for June 24 and 25, with dealers, club and individual displays. Un-

fortunately the news reached this editor too late for inclusion in the last issue of Current Events. We trust the show was a huge success and regret not being able to do our bit toward making it so.

The Mineral and Lapidary Society of Pittsburgh, Pennsylvania, held a Question and Answer program in April, with everyone asked to write at least one question which he would like answered on a slip of paper, to be read and answered by volunteers from the floor. It also held a Swappery of rocks, slabs, specimens, cabs or tools. For the May meeting Mary K. Auld, former art teacher at the Hampton Twp. Schools, was scheduled to speak on the making of handcrafted jewelry and points to look for in good jewelry.

The Mineralogical Society of Pennsylvania set its Annual Business Meeting for Sunday, May 15, at the Blue Ball Quarry. Except for a short business meeting, for annual committee reports, and results of balloting, collecting was the rule of the day. Minerals reported from this location include: pyrite, dolomite, calcite, fluorite, quartz, quartz enclosing hematite, and rutile.

The Rockland County Mineral and Gem Society, of New York, including fifty members and friends, on April 29th, visited the world-renowned Lamont Geological Observatory, Palisades, N. Y. (Columbia University) as guests of Mr. Charles T. Fray, research scientist at Lamont and on the research ship Vema on oceanic research. The Vema is now completing its last leg of an eleven month cruise of the Atlantic, Indian Ocean and the Pacific. They were taken on a short tour of the Observatory. The seismograph charts, located in the main building, were recording from instruments buried in the vaults on the Palisades outside of the building. Then they were taken

to the coring-laboratory, where the cores brought up from the depths of the oceans are examined for minute study of the ocean floor. Sometimes these cores are 80 feet long. Many things are being discovered by the study of these clays and over three million year old microscopic shell deposits, especially with the carbon 14 process. Hundreds of these cores, carefully docketed in detail as to their origin are stored.

Next they were taken to the machine-shop, and were very proud to have been given this opportunity when told the first seismograph instrument is being developed here to be rocketed to the Moon.

Then they came back to the main lecture room for further explanation of some of the very important work which is now being done, aided by large charts, maps and colored slides. Ferdinand Magellan, the Portuguese explorer, was the first scientist to start any serious work on this vast subject in about

1520, and now over 400 years later, the Vema, sailing from the Hudson River in Rockland County with its crew and scientists is seriously following in the footsteps of Magellan's flagship, the Trinidad. They saw colored slides taken from the Vema of the Magellan Straits which is 360 miles long as it winds through the narrow straits flanked by snow-capped mountains. It was here that Mr. Fray spent some time ashore in a small tent with instruments to make further explorations.

It has been known for a long time that there are many mountain ranges which are higher under the sea than those we know on terra-firma, and many deeper canyons wider and deeper than the Grand Canyon of Arizona. The scientists at Lamont are substantiating and accurately charting these findings. In fact one exists where our own Hudson River estuary empties into the Atlantic, called the Continental Slope.

Other discoveries include the establishment of sound channels where observation post can be built, something like a stationary light-ship housing instruments which will be able to record by triangulation the exact spot within a mile where a ship, plane, or nose-cone of a satellite has dropped into the ocean, so that within a very short time rescue of these and human lives could be saved. Another important research subject is that of Atomic wastes which are now being dumped into the ocean in sealed containers. Study is being made of the circulation of the water around these areas for the safety of mankind and other organic matter such as fish; crustaceans which are tolerant to the radiation and could be dangerous to man if consumed as food.

Many slides were shown of the life on board the Vema, and the machinery and method which is used for the coring. Assisting Mr. Fray as projectionist and receptionist was Miss Celia Turk, Geologist and Secretary.

The Fulton County Mineral Club, of New York, viewed specimens from Ellenville, N.Y., of quartz crystals, displayed by Louis Valachovic and various minerals from the Wawarsing area, New York, displayed by its president Andrew Palmer at its first meeting in April, with a very successful auction increasing the club treasury. At the April 25th meeting a very good report of the Ellenville, Wawarsing and Kerhonkson field trip taken by the club the previous day was presented by Jo Van Tassel, who displayed some very nice crystals, as did Roy Palmsteer and Reta Palmer. Henry Gasket distributed good specimens of iron pyrite ore to members collected in the Newark Valley near Oswego. Ara Kildilian reported on a field trip to Franklin, N. C. with some members of the Capitol District Mineral Club. Rubies, sapphires, amethyst and rhodolite (rose garnet) were among specimens collected and displayed. From there the group went to

Franklin, N. J., to collect minerals of that area.

Geological Section, Buffalo Society of Natural Sciences, of New York, held its final meeting of the season in May, with a geology auction. Donald Armistead was to begin the auction of whatever the members wished to dispose of in fossils, minerals, gemstones, books, etc., with Clifford Awald to take over when his voice got tired, with all proceeds going to the sellers. The door prize for this occasion was a 2½ inch epidote crystal from Prince of Wales Island near Sulzer, Alaska. The April door prize was won by Michael Zojka.

The North Jersey Mineralogical Society, of Paterson, had Kurt Segeler of Brooklyn, N.Y., present a program on Crystallography in April, with a display of crystals in the various systems. The first field trip of the season was to Chimney Rock Quarry to hunt zeolites, copper minerals and fluorescent calcite crystals. The second trip around the middle of May was to hunt serpentine at Montville, N. J. A third trip for the Memorial Day weekend, 3 days, was planned for a Herkimer "diamond" hunt, near Middleville, N. Y.

The Newark Mineralogical Society, of New Jersey, heard Prof. E. F. Pratt of Upsala College, East Orange, speak on Sedimentary Rocks and their Formation at its 361st meeting on March 6th. He also exhibited specimens to illustrate his talk. Mrs. C. Anthes presented the best collection of green minerals in the club competition for the month. At its April meeting on the 3rd, Peter Kondrosky, whose lifelong hobby has been coal and its minerals, showed some fascinating pictures in his "A Trip to a Coal Mine". For its May 1st meeting, Dr. Kemble Widmer, N. J. State Geologist was scheduled to speak on Metamorphic Rocks, in addition to two films. On Sunday, May 22, a field trip was set for the Buckwheat Dump at Franklin, N. J.

This society reports with regret the death of its oldest member, Dr. Paul Walther of Elizabeth, who had been a member for 45 years.

The Southeastern New Hampshire Mineral Club, of Dover, had Mr. J. B. Moore, past president of the Antrim Area Mineral Club, speak at its April meeting on Fluorescence. His explanations were comprehensible even to the amateurs, and he supplied samples of fluorescent response to argon bulbs, BLB tubes, and a short wave black light or Mineralight. He displayed a large case with sizeable specimens of hyalite, wernerite, hackmanite and others which responded colorfully to two BLB tubes. A smaller case contained specimens of Franklin, N. J., material which leaped into dazzling color when the black light was turned upon them. Three paintings were displayed, quite unspectacular until illuminated, when roses

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and brilliant butterflies appeared; and even New Hampshire's famous Old Man of the Mountain silhouetted against a sunrise. These pictures were painted by Mrs. Nadeau with material ground from fluorescent minerals by Clayton Ford of Lakeport. It was also stated that besides providing a delightful hobby, black light has many uses valuable to industry, and in conjunction with fluorescent paints and dyes, provides color spectaculants in the entertainment world.

Specimens from members' collections were displayed during March in the Library at Hampton, N. H., comprising minerals found locally, showy minerals from world-wide localities, and lapidary work. Then the collection was loaned to the High School in Portsmouth, N. H.

This society had the largest attendance of the season when Mrs. James M. Dearborn, Vice-President of the Eastern Federation and Past President of the Boston Mineral Club, was guest speaker at the May meeting. Her subject was Volcanics of the Paradise of the Pacific. Mrs. Dearborn displayed many illustrative specimens, including the famous Pele's Hair, and also showed views of the Convention in Oregon as well as excellent color slides of the gorgeous collection of Mrs. Helen M. Rice, President of the American Federation.

The Antrim Area Mineral Club, of New Hampshire, held its February meeting in the Antrim Elementary School, the program including a mineral auction, an identification session, with many unusual minerals identified by the help of Specific Gravity apparatus, reference books and other means. In March, Lawrence Rising of East Andover, N. Y., exhibited gemstones from Brazil and explained each type thoroughly. Mr. Clayton Ford, of Lakeport, spoke on Carbonates, with specific emphasis on the Calcite and Aragonite families. He had some very beautiful specimens to exhibit.

The April program included an outing to Dartmouth College in Hanover, N. H., where members viewed the famous Dartmouth Mineral Exhibit. Dr. Chaffee of the College explained the exhibits. Following this, a supper meeting was held at Norwich, Vermont Grange. Prof. John B. Lyons of the Dartmouth Geology Department was the speaker on this occasion. The annual Open House was scheduled for Mr. James B. Moore's Mineral Barn in May. Mr. Moore expects to have a new Fluorescent Section added this year.

The Mississippi Gem and Mineral Society, of Jackson, after its most successful show, the first ever held in Mississippi, are "pushing" hard and hope to have representation in the Eastern Federation show at Asheville this year. The club members went on a diamond

hunt to Arkansas in April, and for its April meeting Miss Lillian Eno, a member, gave a demonstration on cabochon grinding and polishing, with reports on the diamond hunt.

The Boston Mineral Club, of Massachusetts, had Dr. William Dennen, Professor of Mineralogy of the Massachusetts Institute of Technology, speak on Spectrography, one of the oldest physical means of chemical analysis, on April 5. On April 18 Dr. Donald Peacor, graduate of Tufts, spoke on "N. E. Pegmatite Phosphates" with emphasis on triphyllite — lithiophyllite alteration products, illustrated with specimens and slides. On April 24 a field trip was scheduled to a lead mine in Loudville, Mass., to hunt for lead xls, pyromorphite, wulfenite xls, sphalerite xls, stolzite, barite, anglesite, pyrolusite, cerussite, calcite, limonite, pyrite, chalcopyrite, galena, malachite and quartz xls.

The Gem Cutters Guild of Baltimore, Maryland, had a most outstanding show on April 30, with a steady stream of visitors from opening until closing, and received many compliments on the exquisite displays. The show was confined to the lapidary work, mineral and fossil collections only of the members, filling the entire auditorium at the Roosevelt Park Recreation Centre. Terrific strides have been made by members of this society in the ten years of its existence. On May 11 a tenth anniversary banquet was held. Among the former presidents who spoke on the 10 years history of the club were Edward A. Geisler, Clinton C. Davison, John M. Wise. William M. Crosby, currently President, read a message from the first President and founder of the society, James W. Anderson. Mrs. Elsie Kane White, Past President of the Eastern Federation, gave facts on the Federation and its activities through the past ten years. August C. Gross was General Chairman, with Charles F. Scofield as Master of Ceremonies.

Twenty-six members attended the two-day field trip to Madison County, Virginia, in May, with two more attending for one day, and bagged a good supply of unakite, jasper, epidote and blue quartz. Twenty-five members went on the one day trip to Calvert County, Maryland, on May 28, attended by a constant downpour of rain, to find the favored fossil beds submerged under high tide and waves from the northeaster. Some fossils were found by the more persistent hunters, and quite a few sharks teeth were found at Plum Point, where some of the group made a short stop on the way home.

The Georgia Mineral Society, of Atlanta, had Cordes Oetjen scheduled to talk on opal mining in Australia for its May meeting, with the

Gem Club having Mrs. Nelson Severinghaus for a talk on jade. On May 21 they planned a gold panning expedition near Woodstock, then to another location for cabbing quartzite and other minerals. Joseph T. Callahan, USGS District Geologist, was the speaker for June, to compare mineral hunting in Arizona with mineral hunting in Georgia. The Gem Club had C. Wayne Wilson lined up to speak on June 20 on How to Determine the Value of Gems, including both rough and cut stones. A field was set for a visit to the beryl-rose quartz mine below LaGrange for this month.

The Miami Mineralogical and Lapidary Guild, of Florida, held its first annual show in March in the Woman's Club Building of the Miami Museum, showing gems, faceted stones, cabochons and silver work, with an attendance reported of about 2,000. There were also demonstrations, special exhibits, fluorescent displays, science fair displays and a swapping table. Leo Hauser won the best in show award for faceting. Tay Lowe won best in show for mixed lapidary and Evan Perrin in the junior division. A color movie about diamonds was shown at its April meeting, with a field trip to the Museum Rock Shop at Fort Lauderdale.

The Miami Mineral and Gem Society of Florida viewed slides of the West and Hawaii by Frank Stoutenburg in March. In April Walter Blackwell gave a fine travelogue with the use of slides, covering the southeastern shoreline of Florida from Jupiter to the Keys. The society also joined the Miami Mineralogical and Lapidary Guild for its first annual show Rock-oree in March.

The Gemcrafters of Miami, Florida, viewed the film *The Gift of Kings* of The Linde Company and had a talk by Homer L. Gibbs of The Norton Company on abrasives in the lapidary field in March. In April it had a color film of The Norton Company on the production of grinding wheels and abrasives, shown by Homer L. Gibbs, followed by a series of color slides furnished by Walter Blackwell, many of which were taken in the Gem and Mineral Section of the National Museum in Washington.

The Gem and Lapidary Society of Washington, D. C. had a film program on Star Sapphires and Star Rubies from the Linde Company in April. In May Program Chairman Mr. D. E. Couch was scheduled to give some Helpful Suggestions on "Lapidary and Silversmithing for Those with very Limited Space". Field trip in April was to the Cedar Hill Quarry for serpentine, kammererite, pectolite,

brucite, calcite, actinolite and williamsite. Arlington Quarry in Virginia was location for the May trip.

The Danbury Mineralogical Society, of Connecticut, held its annual dinner on April 23 at the Sunset Restaurant. Its annual show was held on May 1st at the War Memorial. Talks on earth sciences were given by Ronald Januzzi, founder and director of the Society, and by Harold Banks, Jr. David Seaman, Assistant Curator of the Department of Mineralogy of American Museum of Natural History, judged the exhibits. First prizes were won by Harold Banks, Jr. and Lionel Valluzzo of Danbury, and Isabelle Perry of Bethel and the Gilbert and Bennett School of Georgetown. Second prize ribbons went to Elizabeth Mundt and Philip Banks of Danbury, William Othouse of Carmel, New York, and Richard Morgan of Avon. Third prizes were awarded Richard Derr of Brookfield, Peter Ziegler and Craig Martin of Danbury. Mrs. Peter Montesi won a special award for her exhibit on the importance of sulfur. In the lapidary division the exhibitors were Fred Jones of Ridgefield, Mr. and Mrs. Clinton Wood of Beacon, New York, and Mrs. George Braun of Ridgefield. The demonstration and exhibit of fluorescent minerals was one of the busiest places at the show.

Mr. Fred Jones of Ridgefield spoke on gems he cut from specimens he found on a trip to Nova Scotia and the different localities that are open to the public in March.

The Alabama Mineral and Lapidary Society, of Birmingham, report a record attendance and particularly lively one for March, when "Professor" Jim Davis described the pegmatite located near Gold Hill, Alabama, and displayed specimens collected in this location. Mrs. Gladys B. Hannaford from New York spoke in April on Diamonds, and is well versed on the subject, having visited all known diamond locations in the world, actually going into them to see how the gems are extracted from the earth.

Arthur Dunning lead a two-day field trip to the Ruby Mines near Franklin, N. C. and much success was reported on the panning of the ruby gravels with enough specimens procured to justify the trip.

THE NEW JERSEY MINERAL AND GEM SHOW

The show of the five New Jersey societies is now history and seems to have made history, for it has been described as great, and meeting all expectations. It will remain long in the memory of those who attended, and the attendance was in the neighborhood of 3,000 persons.

The show was opened at 10 A.M. on Saturday, May 7, with one of the Town Commissioners, representing the Mayor who was away, and a New Jersey Assemblyman, breaking a beautiful geode in two. Half was presented to each official. But wait, for those who might be horrified at such treatment of a geode, it had been carefully halved before and sealed with duco cement for this ceremony.

The program for Saturday began with The White Wonder, a program of the Morton Salt Company, followed by a Matter of Time — (Asbestos) of Johns-Manville; then Gems of Romance (Famous Diamonds of the World) by N. J. Bell Telephone Company. The Great Land (Alaska) was presented by North American Van Lines, and The Big Reach (Rock Trip to the Moon) by the Douglas Aircraft Company. In the evening a film and lecture by Victor Pribil, President of the New York Mineralogical Club, entitled Gem Cutting for Amateurs. On Sunday the program began with

The Petrified River (The Story of Uranium) by the Union Carbide Corp. and the United States Bureau of Mines, followed by Minerals of New Jersey by Prof. E. F. Pratt of Upsala College. Producing America's Buried Treasure was third, presented by the Georgia Marble Company, closing with The Great Island by the Hawaii Tourist Bureau.

Special exhibits included Gems of Capt. John Sinkankas, USN; another exhibit of Gems by Otto Goetski, courtesy of Newark Museum; American Indian Application of Minerals, by Herbert C. Kraft, Collector, Lecturer and Student of Early Man; World Famous Diamonds (Replicas) - Steps in Faceting by Wiss Sons, Inc., jewelers; Jade by the Imperial Jade, Ltd; British Crown Jewels, by British Overseas Airways and Space Rocket and Minerals - Boy Scouts of Troop 13, Westminster Presbyterian Church.

Commercial booths were limited to sixteen, and an award was made to the dealer presenting the most attractive display. This was won by Floyd Wilson from Micaville, North Carolina.

Adding to the beauty of the show were the many club and individual displays of mineral collections and lapidary work.

EASTERN FEDERATION HISTORY

BY FLORENCE C. HIGHT, Historian

(1955 Convention continued from May-June issue)

Among the unusual booths this year was the one of Alaskan and Eskimo artifacts, fossils and minerals. Also, the booth of the Wilaren Studios of Washington. This company is making a study of the work of the Stone Age early American, - especially the arrowheads or blades of the so-called Folsom man, the Yuma man and the Sandia district. They are making authentic reproductions of original ceremonial artifacts and using them in a new type of silver jewelry.

It is impossible to comment on each dealer's material and equipment. Aside from Schortmann's fine specimens, - they always have a large display of desirable minerals to linger over, - we were fascinated by the fur-like variety of amphibole called byssolite from the vicinity of Centerville, Va., and by Stewart's Gem Shop exhibit from Boise, Idaho. They brought pebblelike chunks of a red-purple-colored star sapphire, and handsome frames of scenic polished jasper which they called "Wilakite" from Willow Creek, Idaho. The whole show was studded with various names for

what appeared to be agate in some form but was identified by place or locality names.

There was one booth we visited every day or oftener, trying to decide whether we could or could not afford a fair sized specimen. This was the exhibit of the Daybreak Uranium Company, of Spokane, Washington with the gorgeous green autunite. Dr. Switzer of the National Museum in Washington says this autunite is exceptional and is the world's finest.

The young fellow in charge of the specimens, in an off period, told me that his family once lived in that Mount Spokane area and "run cattle", - went broke, nearly starved, and moved away thirteen years ago. That same year the neighbor decided to put in a line fence. In digging holes they broke up this material. They examined it, didn't know what it was but put the colored pieces in some tin cans and set them in one of the out-buildings. This spring (1955) they heard of uranium being found on the neighboring Spokane Indian Reservation and went down

to call. When they saw samples they remembered the post hole material, went home and searched out their tin cans of thirteen years ago.

Autunite is a secondary uranium mineral, which Daybreak mines on the western foothills of Mt. Spokane. Atomic Energy Commission contracts had been attained for shipment of 1000 ton from the Daybreak property, and 1250 tons from the Morning Star holdings. He also told me that 62% autunite is pure uranium ore and this is 60%. Autunite crystals are 42 to 60% uranium oxide. However, there isn't too much of the type specimens he was exhibiting.

James F. Fox, President of the Daybreak, challenges any other uranium producing areas to come up with autunite specimens equal to these, mined only a few feet under the surface.

While the Convention was going on (September 27 to 30th) Daybreak was working to merge with Morning Sun and discussing a plan to lease 320 acres of the Spokane Indian Reservation.

The platform stretching across the end of the room was occupied by the Guffey Institute and Lapidary, of Washington, D. C. and had demonstrations of cutting and polishing.

Mr. Guffey had a beautiful table on display that was about 15" high and fully 6 feet across. It was formerly owned by the Emperor of Korea. This huge circular slab of marble was inlaid with pearl shell of many colors which formed a map of Korea in the center. The edge also was inlaid with intricate patterns of green, blue and pink pearl shell as only the Orientals have the patience to exe-

cute.

Leading from the commercial exhibits was a thickly carpeted curved lounge, known in the hotel as Birdcage Walk. One side was glassed and overlooked a rose terrace, for while we were two flights down, the hotel is built on a hillside; the other side had the constantly guarded exhibits. Here was the exhibit from the Union of South Africa, with a model of the largest diamond ever found, - 3024 carats, found in 1905 - and a case of radioactive uranium ore, chalcopyrite, corundum, bornite, gold-bearing pyrites, asbestos, specimens of serpentine, copper and corundum with margarite.

The next case was loaned by the Smithsonian Institution. This was a large case of uranium minerals of the United States. Ten years ago practically no uranium ore was mined in the U. S. Today the U. S. ranks second in the production of uranium.

Here, too, in all its guarded glory was the case containing the Eisenhower black sapphire that was described earlier, and next to it stood the "Sphere Trees", the most artistic display racks of the Convention. They were the handiwork of Paul A. Broste, a farmer of North Dakota, to hold his beautiful spheres. The tree shaped racks were constructed of steel bands and aluminized. One rack holds 85 spheres and the six foot tall one holds 115 spheres. Many other colorful ones were placed below the racks. Mr. Broste said he had 370 spheres from the size of large marbles to over 12" ones.

To Paul Broste the spheres are emblems of eternity, - there is no beginning nor end.

(To be continued)

MINERALOGIST MAGAZINE SOLD

On page 98, June-July-August-1960, MINERALOGIST MAGAZINE, appears the following item, titled—New Ownership:-

"This is the last issue of THE MINERALOGIST MAGAZINE to be printed at Portland, Oregon. Ownership of the magazine has been taken over by Don MacLachlan, editor of GEMS AND MINERALS, Mentone, California. All future issues of THE MINERALOGIST, will be mailed from the new publishers.

"New and renewed subscriptions for THE MINERALOGIST should be sent direct to, THE MINERALOGIST, P. O. Box 808, Mentone, California. All present unexpired subscriptions will be fully honored and filled by the new publishers.

"Founded in 1933, THE MINERALOGIST MAGAZINE has been under the ownership and management of the Dake family, with H. C. Dake as editor. The Dake family wish to thank the loyal subscribers who have supported the magazine for many years."

ROCKS AND MINERALS extends its best wishes to Don MacLachlan and may THE MINERALOGIST under its new ownership continue to grow and prosper. Furthermore may the very warm interest and cooperation that always existed between Dr. Dake and the Editor of ROCKS AND MINERALS continue its pleasant relations with Mr. MacLachlan.

Club and Society Notes

Attention Secretaries—Please submit neat copies. Give dates and places of meetings. Check names for correct spelling.

Chautauqua County Gem and Mineral Society

As a new club we would like to join the ranks.

Our first meeting was on December 1, 1959 at The Hobby Shop in Fredonia, N.Y., with nine interested people who wanted to form a club. At our April meeting there were twenty-four members.

At the January meeting Mr. Irving Peters and Mr. Ray Marinic showed us their collections of precious gems. Ray has tourmaline, amethyst, imperial topaz, zahia topaz, kunzite, golden beryl, aquamarine, morganite and smoky quartz from Brazil.

Peters has a black opal from Australia, a 65k precious opal and an 8k octagon amethyst. Also some imperial jade from Burma besides many of the Brazilian gems.

Robert Patterson, our program chairman, obtained slides from the Eastern Federation of micromounts and crystal formations, which he showed at the March and April meetings.

Our locality is rich in fossils, as well as some garnet, so we are planning on some interesting field trips this summer. This area is also one of the few places where "cone-in-cone" rock is found.

Mrs. Nina Bates
Corr. Sec'y
Bear Lake Road
Fredonia, N.Y.

Fox Valley Rock & Mineral Society of Aurora, Ill.

First regular meeting was held on May 9, 1960, at which time 43 members signed up, electing the following officers: Pres.-Claude Valentine, R 1, Box 87, Aurora, Ill.; Vice Pres.-Elliott C. Hutton, 420 Marion Ave., Aurora, Ill.; and Sec.-Treas., Mrs. Albert W. Griffin, 135 S. Westlawn Ave., Aurora, Ill.

Should any reader or subscriber of R&M living in the Aurora area wish further information, contact one of the officers.

Arizona Mineralogical Society

The highlight of the Mineralogical Meeting held recently was a talk given by a delightful couple—Albert and June Zeitner. An interesting couple. They previously operated a hardware store and June taught school. All this was left forever after their first planned rock

hunting tour that was to be for a few months but turned out to be for 15 months.

I'm pretty sure most of the audience, up to then, had never realized the great wealth of materials—rocks and minerals that the Midwest states have. Her description of them and the samples from those states that she had to display with her talk, left us all drooling with greed?

She included the Dakotas, Nebraska, Iowa, Michigan, and Illinois. The iron mines; zinc mines; the deepest copper mine; the richest gold mine; granite quarries that yield the finest quality granite used in monuments. The largest sand dunes are in the States. Glaciers of "drift diamonds". There is Helium—and pearls, gem quality. Coal oil; Gypsum, Lithium, Blue Celestite, Golden Barite; Marcasite; Moonstone; Sand Calcite xls; Thomsonites, and the much coveted and hard to find Cycad, which is petrified Palm root, with the pine-apple designs which help to identify it when you are lucky enough to find one.

She showed us petrified moss; Selenite roses, Aragonite, and cabochons made from several varieties of petrified wood. She told of Tin, Limonite, Tempsky stone, Dolomite xls; Petoskey stone, which is good carving quality; a new find of Fluorite, with un-countable faces, discovered by a Mr. Clement. And, like whipped cream on a dessert she added geodes that are found along the rivers and creek beds in Iowa—inside of which are found any one of as many as 23! different minerals.

Rockhounds of the Midwest, we salute you!

The breath-takingly beautiful, exotic, and rugged scenery of Bajo, California, was enjoyed by the Society when Mr. and Mrs. Cliff Dayton of the Saguaro Camera Club presented movies of the jeep trip they took in that area. The colorful shells and sulphur crystals to be found there were especially tantalizing to the rockhound audience. Mrs. Dayton's descriptive narrative made each of us a member of their party, the photography in its perfection helped carry out the illusion, and appropriate music in the background completed the presentation.

Mrs. J. N. Salvino
Corres. Sec'y
1447 E. San Juan
Phoenix, Ariz.

Tioga County Rock and Mineral Club

On January 31, 1960 a meeting was held in Owego, (Tioga Co.), New York between Mr. Edward Thomas, Mr. Don Pitcher and Mr. Virgil Van Natta to lay the ground work for the formation of a rock and mineral club. After much pondering and discussion the basic ground work was completed. A small notice was run in the local paper asking those who would be interested in such club to attend the first meeting on February 13, 1960. This meeting was held in the rear of one of the local business establishments.

To the amazement of the founders, 25 persons attended this meeting. An election of temporary Officers was held in which the three originators, Mr. Thomas, Mr. Pitcher, and Mr. Van Natta were elected to President, Vice President, and Secretary-Treasurer respectfully. Permanent officers were elected several meetings later reinstating all the temporary officers. Mr. Bud Gordner was elected as secretary to help relieve the burden of work from the shoulders of Mr. Van Natta.

Our meetings are held every third Tuesday of the month at 7:00 P.M. We are presently holding our meetings at the library on Main Street, Owego. We try to keep the business portion as brief as possible so that more time can be spent in informal general discussion, trading, and what have, you.

Bud Gordner, Sec'y.
18 Fulton St.
Owego, New York

Pomona Valley Mineral Club

The Pomona Valley Mineral Club, Inc., a member of the California Federation of Mineral Clubs, met in the Seaver Laboratory of Pomona College, Claremont, California, for its regular monthly meeting on May 10, 1960.

We were entertained by a member, Mr. Illingsworth, who showed color slides of Utah, Arizona, and the Mother Lode Country of California.

The new slate of officers for 1960-1961 was installed. President: Glen W. Weist, 2048 Kathryn Ave., Pomona, California; Vice President: John A. Daniels; Secretary: Mrs. Margaret Reichardt; Treasurer: Mrs. C. W. Henderson; Federation Director: Mrs. Eula Short; Alternate Federation Director: Mr. Sterling Pugsley; Directors of the Pomona Valley Mineral Club: Mr. Orrin Hillburg, Mr. Sterling Pugsley, Dr. John Sugar.

Helen F. Welch, Publicity
127 West Eleventh Street
Claremont, California

N. H. Field Trip Televised!

Editor R&M:—

Things are picking up a bit here now, the North Shore Mineral Club invited the South-eastern New Hampshire Mineral Club to join them at Raymond-Chandler quarry (in N.H.) and quite a crowd attended. It was televised and appeared on a New Telecast Sunday. Nothing unusual was found—some beryl, columbite, spodumene, and manganapite.

Mrs. Stephen Blake
Kittery Point, Maine

Editor's Note: If only a hint had reached us that the field trip was to be televised, the Editor would have rushed up to the quarry to bunk a handful of diamonds, rubies, and emeralds—then have the Blakes find them. Wow, wouldn't that have created some frenzy and excitement! It would have been for a good cause, too, as the Blakes are two of the finest friends the Editor has. Ten years ago when the Editor paid a week's visit to the Blakes, he was fed *so much* delicious fried chicken, home grown very sweet strawberries, fresh lobsters, and mouth-watering ice cream that he (the Editor) hasn't been hungry since. The chicken would come in on a conveyor belt (as your plate got empty a fresh full one would push it out of the way and you started eating all over again), the strawberries were as large as baseballs (one couldn't fit into a cup). The Maine lobsters were so big Mr. Blake would use a wheelbarrow just to bring one in: while the ice cream was out of this world. Those were happy days, up at Kittery Point, Me., with the Blakes!!!

A New Florida Mineral Club Organized.

The Spanish Trail Mineral Club was organized in Marianna, Florida, Jackson County, on March 18, 1960 with 18 charter members. Officers elected were Harold F. Schollian, chairman and Charles Whitehurst, secretary-treasurer.

Regular meetings are held on the fourth Tuesday of each month at 7:30 P.M. Meetings are in the Science Building of Chipola Junior College in Marianna.

A program committee has been set up to work out a series of talks on various phases of mineralogy to be presented by member instructors. Also included are reports by members of individual collecting trips made and periods on identification and classification of minerals collected.

One of the projects of the club is to assist the Chipola Junior College build a mineral collection for educational and display purposes.

Harold F. Schollian
Box 464
Marianna, Fla.



Rocks and Minerals Association

(INTERNATIONAL)

NOTES AND NEWS

DON PRESHER, PRES. BOX 146, MONTROSE, N. Y.



Following up on last issue's Notes and News which encouraged an active interest in your local schools, I would like to relate an instance where this help has made possible a collection of mineral specimens at the Wakefield School, Portsmouth, Ohio, which is a part of the Piketon School District. This collection has created so much interest that it has been viewed by the Superintendent of Schools and by all the executive heads of the southern Ohio schools. Comments were that it was the best school collection in the state.

It all started back in January when the science class of Mrs. Mary Feurt decided to start a mineral collection. As this area does not offer a large variety of minerals, the logical thought was to enlarge their collection by swap-trading with the fine pipestone (catlinite) and flint specimens that are available to them, for minerals from other parts of the country. The first steps were to contact about seventy people whose names were found in ROCKS AND MINERALS. On this first contact, Mrs. Feurt explained what they were trying to accomplish and offered to exchange, at the same time dresser drawers were being used to build mineral cases that nested together and then painted with white enamel. Styra-foam was purchased to be used as a base to mount specimens and plastic was used to cover cases to keep the display dust-free. Postage was sent to those that offered to send some of their duplicate specimens and pipestone and flint was collected to be sent to those that participated. Total expenditures for the entire project amounted to \$45.

The response was more than their highest hopes and the results as of May 17th is a collection of 909 mounted specimens

that has created a great interest in minerals, not only in their own school but also in other schools as well. Mrs. Feurt has asked me to extend her sincere thanks and appreciation to all of those who have made this project possible. She writes: "Experience, learning and interest, even to the first graders, has been a joy a thousandfold. You will never know how much has been learned and how much the children appreciate it all. From our one hundred and sixty-five students, all sorts of fossils, little pebbles and rocks, good and not so good, come in little and big pockets every day. So much has rubbed off and the children are really amazed."

I am sure I can speak for the whole rockhound fraternity by offering congratulations to Mrs. Feurt for a job well done and our thanks and appreciation to her and to her fellow teachers for their untiring efforts and dedicated service they are giving in the best interests of our children. Incidentally, if anyone has a spare piece of the man made mineral, Carborundum, (iridescent) it would be a most welcome addition to the collection.

Attention, Rockhounds, in the Allendale, N. J. area. If interested in joining a mineral club please contact Mrs. Fred Storms, Wyckoff Ave., Allendale, N. J.

Best of luck and good hunting.
Don Presher.

Please send a self-addressed stamped envelope when applying for membership card.

Mail to:
Don Presher, Pres., R&MA
Box 146, Montrose, N. Y.

Publications Recently Received

CAROZZI—Microscopic Sedimentary Petrography.

By Albert V. Carozzi, Professor of Geology, University of Illinois, 485 pp., 88 figs. Published by John Wiley & Sons, Inc., 440 Fourth Ave., New York 16, N. Y.—Price \$11.50

In this work Professor Carozzi presents for the first time in English the same invaluable approach to sedimentary petrography that led to the great European success of his earlier book, *Petrographie des Roches Sédimentaires*. The author supplies the reader with "ideal" descriptions of given rock-types; that is, descriptions which summarize both the most common appearances of a sedimentary rock-type and those variations which have broad significance. These "ideal types" have been achieved through a combination of as many descriptions of a given rock-type as the author could find in the American and European literature on the subject (references are given to these various descriptions). Thus, the reader is given information on the different rock-types without becoming embroiled in detailed descriptions of local significance.

WAHLSTROM — Optical Crystallography (3rd Edition).

By Ernest E. Wahlstrom Professor of Geology, University of Colorado, 356 pp., many figs. Published by John Wiley & Sons, Inc., 440 Fourth Ave., New York 16, N.Y.—Price \$8.50.

Optical Crystallography functions as an introduction to the subject, or as a review of the basic principles of optical crystallographic theory. The use of the polarizing microscope in the study of crystals and fragments in visible, transmitted light is given special consideration. The more difficult and abstruse aspects receive only minor emphasis, or are completely omitted.

The author avoids the mathematical approach, choosing to illustrate the space relationships with a profusion of two-dimensional and three-dimensional drawings that convey a pictorial (rather than a purely mathematical) understanding.

The Third Edition has been made more modern and effective by a completely rewritten text, a new chapter on crystal rotation methods, and 100 new and improved illustrations. Since many minerals and chemical compounds are identified by optical methods, this book is an invaluable aid to geologists, mineralogists, chemists, and ceramists.

RANDOLPH—Guide Book to the Study of Minerals.

By Dr. E. Oscar Randolph, professional geologist and teacher, 95 pp., many illustrations. Published by Randolph Minerals, P.O. Box 718, Morganton, N. C.—Price \$1.85

This Guide Book is one of the products that resulted from a long teaching experience in which the author had the privilege of working together with students ranging from Junior High through University classes. It is written in as simple and easy language as possible, endeavoring to keep in mind the immature teen-ager for whom primarily the book is written. Furthermore, the essential guides will prove of immediate help to adult amateurs and hobbyists.

CAYCE—Scientific Properties and Occult Aspects of Twenty-Two Gems, Stones and Metals.

A comparative study based upon the Edgar Cayce psychic readings, 50 pp., Published by the Edgar Cayce Publishing Co., Virginia Beach, Va.—Price \$1.00.

The file of 15,000 psychic readings given by the late Edgar Cayce between 1901 and 1945 is preserved at Virginia Beach, Virginia, in the custody of the Edgar Cayce Foundation.

Subject matter of the readings is varied in the extreme, having been governed by the questions of various individuals who had access to the phenomenon during Mr. Cayce's lifetime. Because this booklet's subject was of interest to many of those who had readings—either individual life readings or discourses on the topic—a considerable volume of information on gems and stones is in the Foundation's files.

VICTORS—So you want to start a Rock Shop.

By Arthur E. Victor and Lila Mae Victor, authors of "Gem Tumbling and Baroque Jewelry Making", 52 pp., 1 photo. Published by Victor Agate Shop, South 1709 Cedar, Spokane 41, Wash.—Price \$2.00

In this era of Big Business, Big Mergers, National Markets and Madison Avenue Advertising, the Rock Hobby continues to be an excellent field for the operation of a small business. Maybe we should say "thumbnail sized business" but despite the many favorable conditions, the mortality rate of Rock Shops is appalling.

Like all other segments of business activity this "mortality rate" includes a high percent-

age of closures that we might call the result of "natural causes."

Perhaps sickness or death in the family—or better opportunity in some other line of endeavor or just plain retirement. Then there are many who may voluntarily quit because of the loss of tenancy of a building or lack of interest or low profits or maybe they "just don't like being in business" and decide they would rather work for someone else.

This little book is written for the beginning thumbnail-sized rock shop. It is written to inform, not advise. Information is valuable from any source—Advice is plentiful and cheap and has value only if the advisor is well informed.

Dealers Catalogs.

LapidaBrade, Inc., 2407 Darby Road, Haver-

town, Penn., have recently issued two new catalogs. One is a 10 page illustrated catalog featuring grinding wheels and lapidary supplies. This one, we believe, is for free distribution.

The other is a large 66 page fully illustrated catalog featuring a large number of items such as jewelry, jewelry mountings & supplies, etc. etc.—Price of this catalog is \$1.50.

CAMPBELL—Appalachian Gold.

By William P. Campbell, Jr., Field Geologist, North Carolina State Highway Com-

mission, 42 pp., 4 illus. Published by Appalachian Gold, 503 Gay St., Erwin, Tenn. — Price \$2.00

This is a handbook and guide to gold placers of Southeastern United States. In his Preface the author says:

"For the past few years, I have felt that many of the visitors to the Piedmont of the Southeast have, literally, walked over some of the most history-making ground of our entire country. It was here that during the early 1800's gold was discovered which eventually led to the very development of our nation. Where once there were paths and trails, our roads and highways evolved; where once mining camps noised their life to the world, our towns and cities now breathe; where old timers of that by-gone era dug and sluiced for the prized metal, housing developments speckle the slopes and farms sweep across the valleys.

"Today, Rockhounds from the nation over are enjoying the panning and collecting gold here in the East as was done years ago. Not only are they recovering colors and nuggets but also precious stones of gem quality: beryl, tourmaline, topaz, rubies, moonstone, and garnet from the very same gravels that carry the gold. The old mining belt extending from Virginia through the Carolinas into Georgia and Alabama is being visited and collected in again."

Picken's Mineral Post Card Department

Reo N. Pickens, Jr., 610 N. Martin, Waukegan, Ill., one of our good advertisers, is a photographer whose hobby is mineral collecting. For over a year we have been receiving from Mr. Pickens post cards of minerals in color which he himself had taken. These mineral post cards are so beautiful, and with new ones coming out every month, that we have decided they deserve a spot all their own in R&M and so Pickens Mineral Post Card Department is set aside for them.

"I enclose my four latest cards, this makes a total of 25 different cards now available."—item dated April 11, 1960, from Mr. Pickens.

The cards are very beautiful. They are as follows with captions:

1—"Barite (golden), found in septarium in Elk Creek, South Dakota. A barium sulphate that is brittle and has a hardness of 3. About actual size."—reddish-golden xls.

2—"Galena. Octahedral forms on chert, found on the Kansas side of the Tri-State Mining district. A sulphate of lead with a hardness of 2½. About 1/3rd of actual size."—group of large lead-gray crystals.

3—"Thomsonite, tumbled stones, found near Grand Marais, Minnesota. A multiple silicate of calcium, sodium and aluminum. Has a hardness of 5. About 1/2 actual size."—30 tumble polished red and white stones.

4—"Fossil Leaves, found in concretions broken open at the strip coal mining operation near Coal City, Illinois. From the Alethoplerid group of fern leaves (alethopteris serli Brongniart) of the Pennsylvanian period about two hundred and fifty million years ago. This specimen about 2/3rds actual size."—large dark reddish-brown fern.

WITH OUR ADVERTISERS

Conducted by James N. Bourne

c/o Rocks and Minerals. Box 29

Peekskill, N. Y.

Advertisers are cordially invited to submit News Items to this Department

How about a sturdy, practical hand-vise for use by the hobbyist and jeweler. This item has been advertised for as much as \$2.25 and now can be ordered from Grieger's, 1633 E. Walnut St., Pasadena, Calif., for as little as \$1.00. When ordering this hand-vise, mention S 25-K for prompt handling.

Grieger's have many bargains as above for as much as 33% off. Some of them are: Microscopes up to 300 power for \$8.95, order S 29-K, a 10 inch wood handle-steel center Mallet, order S 26-K, rubber one end, amber plastic other end. You would expect to pay \$3 for this tool, now only \$1.00. A 2 oz. bag of baroque gems in special assortment, good value, order S 37-K for only \$1.00, and last, a B & I Gem Maker, preferred by amateurs and professionals alike, equipped with lapidary equipment and instructions. Motor not included. Order S 40-K for \$39.95.

Grieger's have many more items with big savings to all. All items sold with money back guarantee. When ordering, use order Nos. that end in K on all items for purchase assuring accuracy and prompt service.

Note: The many orders received by Grieger's from readers of R&M attest to the good quality of their merchandise and bring repeat orders deservedly.

Shipley's Mineral House, Gem Village, Bayfield II, Colo., offers through their ad in this issue beautiful hand chipped arrowheads, matching pair for eardrops—\$1.50 a pair. Other specials to be had are tumbled Arizona pyrope garnets \$1.00 per oz., tumbled Mexican ojoitos agate—\$5.00 per lb. Write them

for other specials as well as free lists on cutting materials, books and equipment.

Byron and Lottie Shipley Rohde, proprietors of Shipley's Mineral House, invite those visiting Gem Village in Colorado this year to stop in and see their large new building next to their present store, which will feature handmade Indian Arts and Crafts and a Free museum of prehistoric artifacts.

In the new building which is called "The Wampum Wigwam," Navajo blankets, Indian handmade jewelry, pottery, paintings, etc. may be purchased. Thus, be sure to stop in at the Shipley's Mineral House when in Colorado this year for a very enjoyable visit. You'll be welcomed by Mr. and Mrs. Rohde and they will make your stay more pleasant at their free overnight campground for rockhounds.

George A. Bruce, Pres., International Import Co., of 128 North Parkwood Drive, Forest Park, Georgia, has made available cabochons of all varieties. 18x13mm., oval, 60c each, 25x18mm., oval 95c each. He writes:

"These cabochons are available in aventurine, black onyx, bloodstone, cobra agate, goldstone, red jasper, golden sheen obsidian, rhodonite, rose quartz, golden tiger-eye, and zebra agate among others.

"Very good quality cabochons of Burmese jadeite in colors black, green, red and yellow jade. Ten-day approval shipments sent and please add 10% F.E.T. to taxable items."

Don Bobo of Don Bobo's Lapidary Products, 612-614 West 65th Street, Seattle 7, Wash., relates that the "New

Scott-Murray Hy-Pol tumbler featured in their ad via R&M each issue is one of the better made tumblers being sold today.

"The new Hy-Pol barrels are practically noiseless and material even soft or fragile can be tumbled in this barrel without fear of chipping or breaking. The end of the barrel and liner are also removable, making cleaning no problem. The liners are of excellent quality camel-back rubber which by the way is the same rubber as used in the manufacture of automobile tires, thereby being nearly indestructable.

"So, when in the market for a good tumbler be sure to try our single barrel tumbling machine for \$42.50 and if your need demands, our triple barrel machine for \$87.95. When you have a Scott-Murray, you have the very best."

Latest price list from Burminco, 128 S. Encinitas, Monrovia, Calif., includes some very fine crystallized hydrozincite specimens, the crystals fluoresce a brilliant light blue under short wave ultraviolet light. Priced at 1x2—75c, 2x2 to 2x3 from \$1.25 to \$2.00, and larger sizes up to \$4.50. They write:

"Here are some other specimens offered: Aragonite from Molino de Aragon, Spain, priced at around 45c and up to 1½ inches long, ¼ to ¾ inches thick. Danburite from Mexico, priced from \$1.00 up to \$65.00 Some very nice calcite from Mexico. Groups of crystals on matrix which show prism and base. Crystals are not large, but very attractive. Prices from 50¢ to \$12.50.

Send 20¢ for our latest catalog listing around 300 species of minerals from worldwide sources; 20¢ refunded when ordering from the catalog. We also have a nice selection of Fine Gem Material. Come in and see and then select what you like."

Note: Letters from readers as to their satisfaction in their dealings with Burminco speak well of this advertiser of long standing in R&M.

We mentioned in our May-June issue per this column and again would like

to refer to some very nice Kittitas County, Wash., micromount gold specimens that may be purchased from Frank Waskey, Oakville, Wash.

The gold micromounts, unmounted but carefully selected and packed for shipment at \$1.20 to \$2.00 each. Note: Mr. Waskey's ad this issue when ordering.

From Lloyd W. Harazim, Office Specialties, 2364 No. 58th St., Seattle 3, Wash., we include the following item:

"I wish to introduce myself to my many new and old rockhound friends.

"In 1951 I had the urge to sell unglamorous office supplies such as rubber stamps, typewriter ribbons, stapling machines, etc. My next problem was, to whom I should sell.

"I decided to sell to the rockhounds who operate their own gem and mineral shops in communities where such items are not available at the store around the corner.

"All of this was started in a spare room of my home which I converted into an office, shipping and stock room, and still in the same room, I began the name "Office Specialties," and to this day continue in business under that name.

"May I hear from you rockhounds as to your needs with prompt service rendered."

Note: Let us keep Office Specialties in mind when the need arises for office equipment as mentioned above.

NEW TRADEMARK AND NAME FOR MUSTO-KEENAN DIAMOND PRODUCTS

E. G. Pollak, President of Musto-Keenan Company, Los Angeles manufacturer of diamond abrasive cutting blades and tools, announced this week the launching of their products under a new trade name and symbol—MK DIAMOND.

Established since 1866, Musto-Keenan Company has taken this step to keep pace with its scientific and technological advances in diamond tool production. "It's new and improved products, backed by a full manufacturer's warranty, are the

(Continued on page 383)

COLLECTING FLUORESCENT MINERALS

Conducted by ROBERT W. JONES, JR.

210 S. Rose Circle Dr., Scottsdale, Arizona

Abbreviations: xl—crystal
fl—fluoresces

xled—crystallized
ph—phosphorescence

xline—crystalline

At last, for you collectors of fluorescent minerals, it's here—a regular department devoted exclusively to fluorescent minerals.

In future issues it is hoped that we can provide for you information on localities and properties of well-known and rare or new-found fluorescent minerals. Also, there are many interesting subjects we can discuss such as, photographing, displaying and collecting fluorescent minerals.

For those of you who are occasional fluorescent collectors you are, perhaps, slighting a fascinating area of your hobby. Many readers, I'm sure, have in their collections several fluorescent minerals of which they are unaware. You may not wish to display them as fluorescent minerals but to know these properties and any unusual anecdotes or stories about them will provide for you many hours of enjoyment and "shop talk".

For the present, let's discuss fluorescence in general. This fascinating property of some minerals has been known for many years but until comparatively recent times has been shunted to the background of mineral study by many people. This is probably due to the fact that this property has not been recognized as valuable or useful. Also, equipment, in the past, was costly and awkward to use. Both of these problems have been resolved. Excellent, inexpensive equipment for home and field use is now available to all, as is evidenced by the variety of equipment offered by our advertisers. As for the usefulness of ultra-violet lights, one only has to read figures of the values of scheelite, a tungsten mineral, and secondary uranums discovered through the use of ultra-violet to realize how im-

portant fluorescent prospecting has become.

Aside from the commercial uses of ultra-violet lights, their application to mineral collecting creates an entirely new and spectacular field. I doubt that anyone knows exactly how many minerals fluoresce. I have catalogued upwards of 300 minerals which show fluorescence to some degree. Not all these minerals are of interest to the general collector of minerals but the fluorescent collector will certainly be interested in them. Also, there are many fallacies concerning fluorescence and fluorescent minerals which are in need of clarification. As an example, the uranium mineral torbernite is referred to as a yellow-green fluorescing mineral by many writers. Others are equally positive that torbernite is a none fluorescing mineral. Dana's "System of Mineralogy," Vol. II, pg. 982 describes torbernite as a mineral not exhibiting fluorescence. I have checked many specimens from the U.S. and Europe and have not observed fluorescence in any torbernite. Much of the torbernite was associated with other secondary uranums which did fluoresce. This undoubtedly has led to confusion in the past.

At the same time, there are minerals which have been found to fluoresce although no reference has yet been made in the literature. Danburite has been reported as being triboluminescent—gives off light when stroked or rubbed—but, to my knowledge, it has never been reported as a fluorescent mineral.

While checking a quantity of danburite xls in calcite I was thrilled to observe a good green fluorescence in the danburite. This material came from Mina Bufa, Charcas, San Luis Potosi, Mexico. Ac-

cording to Scott Williams, the material all came from one pocket in the mine. The xls are very clear, gemmy, and well-shaped and are in red fluorescing calcite. Not all xls observed showed the fluorescence and those that did varied slightly. Since the xls all came from one spot in the mine it is well to suspect an activator is present. The color immediately leads the observer to suspect a trace of uranium. Only accurate tests will determine the cause. I'm inclined to suspect uranium especially since the mineral fl. green under both long and short wave lights. A good quantity of material was sent to this country so fluorescent danburite specimens should be available for collectors. There are many other unusual and rare fluorescent minerals we'll des-

cribe in future articles for information and interest.

In order for a department such as this to have its greatest value to the reader, as well as provide a maximum of interest, it is necessary for readers to take an active part in the contribution of material. There are many ways this can be done. If you have questions or comments on what has been written let us know. We sincerely invite them. Feel free to inform us of your activities, ideas, findings, etc. so that we can share them with all readers.

If there is any special area you would like discussed or questions you would like answered we will do our best to find, or refer you to, a satisfactory answer. Let's hear from you!

WITH OUR ADVERTISERS (Cont. from page 381)

result of years of research and field study as well as superior engineering and production methods," said Pollak.

"Webb Morrow, General Manager of MK DIAMOND Products, stated that Musto-Keenan blades have been widely sold and used under well known trade names of leading saw and equipment manufacturers. The new trademark has been designed to provide immediate recognition and association of superior diamond blades for tile, marble, stone and lapidary. Plans are underway for production of blades for refractories, germanium, silicon and other industrial products as well as core drills and other diamond tools.

"The entire program will be backed by a comprehensive plan for distribution, advertising in leading publications, merchandising and sales promotion. While continuing to work closely with existing distributors and manufacturers, Musto-Keenan will be seeking newer and broader markets for its products to provide industry with the newest advances in tooling and equipment," said Morrow.

Note: We are pleased to have the

Musto-Keenan Company advertise in R&M and that their diamond products meet with a good response.

Send for your descriptive literature now to the B&I Mfg. Co., Burlington, Wisc., as to their Gem Maker advertised in R&M each issue for \$36.50 F.O.B. Burlington, Wisc., complete, less motor and belt.

"This 6" Gem Maker will serve amateurs or professionals, hobbyists or jewelers and give professional results."

"Our Gem Faceter" for \$15.00 F.O.B. factory will also do a great job for you. We have hundreds of satisfied buyers of the above items and we welcome your order for same. Prices on other lapidary supplies and equipment are yours for the asking also. Get started today by sending your inquiries to B&I Mfg. Co., Burlington, Wisc.

REMEMBER FOLKS

If it's a mineral—our Advertisers have it — If they don't have it — they can get it — if they can't get it — it isn't a mineral.

THE CHAMBER OF COMMERCE
of
SPRUCE PINE, NORTH CAROLINA

Proudly announces its

SECOND ANNUAL

Mineral and Gem Festival

AUGUST 10, 11, 12, 13, 1960

at the Harris High School
Spruce Pine, N. C.

Individual and Club Competitive Exhibits

Dealer Displays

Special Exhibits

Swap Shop

Commercial Exhibits

Craft Room

Lectures and Films

Guided Field Trips

Entertainment

For complete Program and Lodging Information please write to

MINERAL AND GEM FESTIVAL

Spruce Pine, N. C.

Remember 1958!! The huge Eastern Federation Show in Asheville? Well, it's



ASHEVILLE AGAIN!

**10th Annual
Eastern Federation**

**Gem and
Mineral Show**

In Western North Carolina

**"Mineral Showcase
of America"**

Municipal Auditorium

Asheville, N. C.

(Air Conditioned)

AUGUST 4, 5, 6, 1960

FIELD TRIPS AUGUST 7 - 13

(Information: Write Chamber of Commerce, Asheville, N. C.)

Hosts:

Southern Appalachian Mineral Society

Plan now to spend a REAL mineral vacation in the Land of the sky in August

Insect Amber Specimens

Another shipment of this great rarity which quickly sold out like hot cakes last time. Direct from a private collector in Europe and absolutely unobtainable in this quantity elsewhere.

Gorgeous examples of insect life carefully preserved by nature for millions of years. Flies, spiders, ants, etc., etc., Some show several species.

Prices range \$10.00, 15.00, 20.00, 25.00, 35.00, and a superb gem for \$85.00 As we said before, use "Jet Mail" if you missed out on the last lot.

CHOICE CUTTING ROUGH

Any item for \$2.00

Any 10 items for \$15.00

- 2 lbs. **AGATE**, Assorted. Localities, Very Colorful
1 lb. **AGATE**, Dyeing, Brazil, Pre-tested material
1/2 lb. **AGATE**, Montana slices, interesting patterns
1/2 lb. **AGATE**, Striped, from Uruguay, heavily patterned
1/2 lb. **AGATE**, Tempskya, Western U. S. resembles fine grained wood or Fur
1 lb. **AGATE**, Turritella, Snail like pattern
4 oz. **AMAZONITE**, Brazil, Blue-Green, almost translucent
3 oz. **AMETHYST**, Brazil, brilliant translucent purple qtz.
4 oz. **AMETHYST**, Lilac, for cutting large stones
3 in. **AMETHYST**, Geode Sections, ideal for paperweight
5 oz. **APATITE**, Mexico, can be wired as nuggets, or cut, gemmy crystals
5 oz. **AQUAMARINE**, Brazil, brilliant sea blue Beryl
1/2 lb. **AVVENTURINE**, India, Gemmy Green, speckled with Mica Inclusions
5 oz. **AZURITE**, Gemmy Blue Color, resembling Lapis
5 oz. **BLOODSTONE**, India, Bright Red Spots & patterns against Dk. Green
1/2 oz. **CAIRNGORM**, Golden smokey variety Quartz
5 gr. **CATSEYE AQUAMARINE**, guaranteed to cut an Eye
8 gr. **CHRYSOBERYL**, Massive Catseye type, Green-Honey color
3 oz. **CHRYSOCOLLA**, American, resembles fine Turquoise
2 oz. **CHRYSOPRASE**, rare natural Green Quartz.
20 gr. **CITRINE**, Quartz Topaz, clean for faceting
1 lb. **CRYSTAL**, Quartz White clear rounded boulders for faceting
1/2 lb. **DINOSAUR** Bone, Sections of Agatized Bone, Gen. Prehistoric
4 oz. **FLUORITE** Green Rare, for advanced faceting
1 1/2 oz. **GARNET**, Madagascar, Intense Red Color, some preformed material
2 oz. **HIDDENITE**, Brazil, light Green Spodumene
4 oz. **JADE, NEPHRITE**, Wyoming, cuts & boulder sections
2 oz. **KYANITE**, Brazil, flat bladed crystals, greenish-blue shade
4 oz. **MALACHITE**, small well patterned pieces
1 oz. **MOONSTONE**, Ceylon finest Blue Chatoyant variety
2 oz. **MOONSTONE**, Golden, resembles Aventurine in texture, also called Sunstone

POUNDAGE FOR TUMBLING — PER SEALED BAG

8 1/2 lbs.	AVVENTURINE	For	\$ 5.60
4 1/4 lbs.	ROSE QUARTZ	"	4.00
4 1/4 lbs.	AMETHYST CHIPS	"	4.00
4 1/4 lbs.	AMETHYST GREENED	"	8.00
4 1/4 lbs.	AMETHYST DARK	"	13.00
4 1/4 lbs.	CITRINE	"	32.00
4 1/4 lbs.	rock CRYSTAL SMOKY	"	4.00

POSTAGE & INSURANCE — .30 PER LB.

INTERNATIONAL GEM CORP.

15 Maiden Lane

New York 38, N. Y.

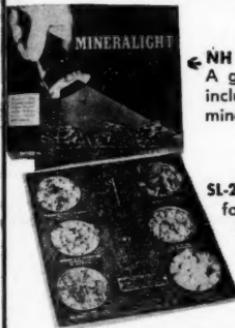


The Magic of MINERALIGHT®!

Your rock collection—interesting in white light—OH, so beautiful when you turn on your Mineralight!

You'll see a colorful new world of fluorescent beauty in minerals—visible only in ultra-violet rays!

BL-2537



SEVEN models — one exactly right for you.

← NH "Cub"

A genuine short-wave lamp for 110-V. AC only. Price includes 6 small trays of fluorescent minerals plus a mineral identification booklet. UL Approved.

ONLY \$14.75

SL-2537. Most popular of Mineralight models. Ideal for home use. Versatile unit adaptable for field use. Has high silica transmitting tube and Alzak reflector for greatest U.V. output. UL Approved.

ONLY \$39.50



For name and address of nearest dealer or further information, write



ULTRA-VIOLET PRODUCTS, INC.
San Gabriel, California

RM-7-B



Excellent Prices

STARS * RUBIES * SAPPHIRES * TOPAZ

All stones cut and faceted

BLACK STAR SAPPHIRES, from Siam. All guaranteed to have good stars.

1 to 5 ct \$3.00 per ct.

5 to 15 ct \$4.50 per ct.

DIAMOND CUT GENUINE RUBIES, from Burma and Siam. In round and oval shapes. Good blood-red color.

1/4ct. or over \$20.00 each.

1/2ct. or over \$45.00 each.

3/4ct. to 1 ct \$75.00 each.

1 1/2ct. to 2 ct. \$150.00 each.

DIAMOND CUT BLUE SAPPHIRES, from Siam.

2 to 3mm \$3.00 each.

CITRINE TOPAZ, from Brazil.

15 to 20ct \$10.00 each

ADD 10% Federal Tax on all commercial stones.

Send check or money order to

A-Dell Importing Co., Inc.

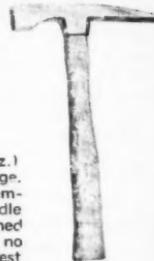
1890 Coral Gate Drive
Miami 45, Florida

Prospectors and Geologist Pick

\$2.50 each

"Rock Hammer"
to you.

Two solid pounds (33 oz.)
8" from face to chisel edge.
11" top to handle. Comfortable hard-wood handle
(cemented into polished steel head) carries back no
fatiguing vibration. HI-Test Quality Product. The very
best for less. Pay postage and save dollars.
Hammer: Only \$2.50; Postage add 85¢



HARRY ROSS

Scientific & Lab. Apparatus
61-Z Reade St., N. Y. 7, N. Y.

GOLD PAN ROCK SHOP

Gems — Minerals — Cutting Material
Mineral Specimens — Lapidary Supplies

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Carson City, Nevada
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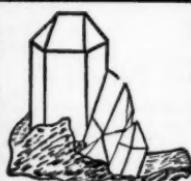
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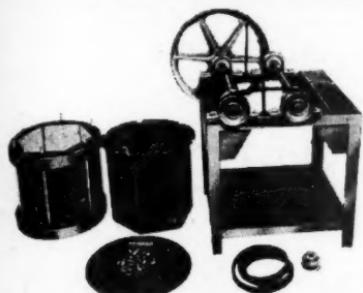
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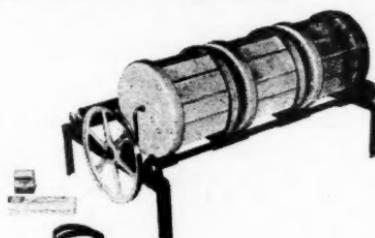
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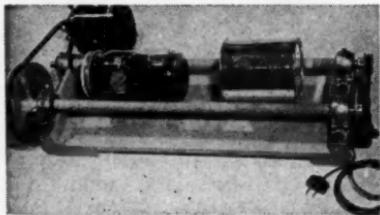
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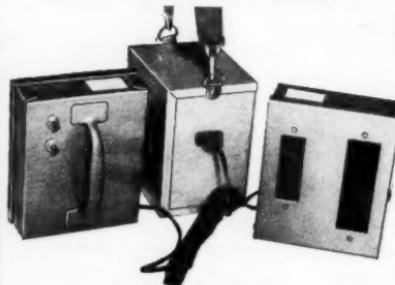
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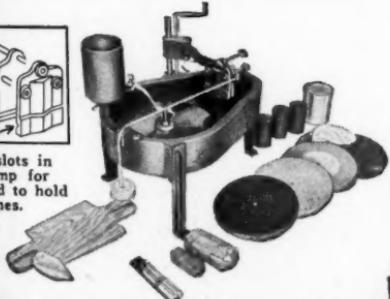
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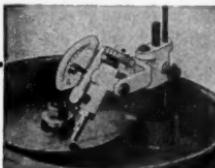
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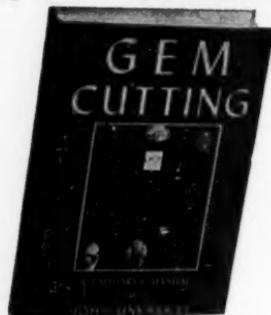
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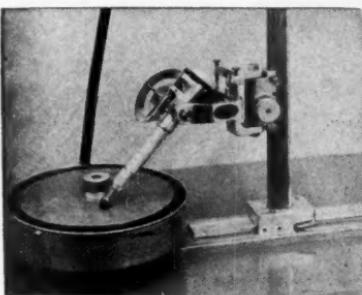
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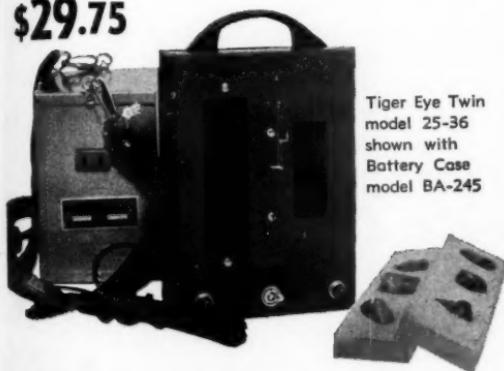
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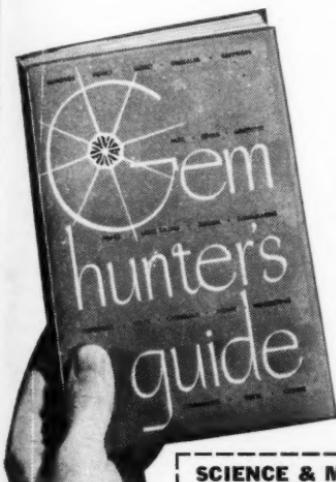
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ROCKS AND MINERALS

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GALENA	- Fine group of octahedral xls with Pyrite xls. 3" x 5". Colo.	8.50
ANATASE	- Fine xls on Albite xls & Quartz xls. 2" x 5". Uri, Switz.	5.00
BARITE	- Fine perfect whitish xl. 1 1/4" x 3". Cumberland, Engl.	2.50
TOURMALINE	- Fine dark-blue pencil xl. 1/2" x 4 1/2". Minas Gerais, Brazil	17.50
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WULFENITE, fine x's. on matrix. $3\frac{3}{4} \times 2\frac{1}{2}$ Lamentos Mt., Chihuahua, Mexico. \$6.00

AUSTINITE, micro. xld. on matrix. 3×2 Mapimi, Durango, Mexico. \$4.50

ROSASITE, micro. xld. on matrix. $3\frac{1}{2} \times 3$ Mapimi, Durango, Mexico. \$7.50

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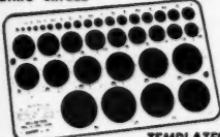
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